ALCOHOL EDUCATION FOR ADOLESCENTS:

AN EVALUATION STUDY

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ABSTRACT

The literature on alcohol education for young people suggests that few interventions have been effective in reducing misuse of alcohol amongst this population. However, in a high proportion of such interventions, there is an absence of any firm theoretical foundation and of systematic evaluation.

This research therefore set out to conduct a controlled prospective study of the effectiveness of a school-based alcohol education programme for students aged 12 to 13 years. The theoretical basis of the proposed intervention is dicsussed in this thesis with reference to theories of substance use and models of health related behaviour.

The research had three phases: (1) pre-intervention survey of alcohol related knowledge, attitudes and behaviour; (2) development and teaching of a short alcohol education package and (3) post-intervention survey. Five experienced health/social education teachers were involved in the development of the alcohol education materials. Nine participating schools were selected from three regions of Britain - Highland in Scotland, Berkshire in England and Dyfed in Wales. The pre-intervention survey was completed by 1586 respondents, and the post-intervention survey by 1350 of the original study group.

The findings from the pre-intervention survey reinforce those from other studies suggesting that the majority of 12 to 13 year olds have limited experience of alcohol, and that this is most likely to occur with parents in the family home. A small percentage, however, reported experience of negative consequences of alcohol consumption and intoxication.

The main focus of the study, the evaluation of programme effectiveness, was assessed quantitatively in terms of the shift in alcohol related knowledge, attitudes and behaviour reported pre- and post-intervention. The principal finding was that the young people exposed to the alcohol education showed a significantly greater increase in alcohol related knowledge than did the controls. There were no statistically significant differences between control and intervention groups in either attitudes or behaviours. A consistent pattern however did emerge for alcohol related behaviours, with controls more likely than the intervention

group to have increased: (a) the recency of their drinking (as indicated at the time of survey); b) the quantities of beer and wine drunk on the last occasion and (c) the maximum quantity of alcohol drunk in one session.

It may be concluded that the approach to alcohol education for young people adopted in this study had some impact on the target population in the intended direction. The implications of this outcome for future initiatives are discussed.

ACKNOWLEDGEMENTS

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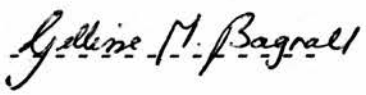
The fieldwork for this project was totally dependent on the goodwill of local education authorities and schools which agreed to participate in the research. I am extremely grateful for their willing co-operation throughout the duration of the project. Additional thanks must go to the 'specialist' teachers for their valuable contribution to the development of the alcohol education package, and to all the pupils who so willingly completed the survey questionnaires.

Throughout the duration of the research, I received encouragement from many colleagues and friends. I am extremely grateful to both my supervisors, Dr. Martin Plant and Mr. David Peck, for their support and assistance throughout. Thanks must also go to my colleagues in the Alcohol Research Group, and to Mrs. Jill Sales and Mr. John Duffy for statistical advice. I am indebted to Mrs. Sheila McLennan for typing the main text with care and efficiency, and to Ms Katherine Cheshire, Dr. George Thomson and Mr. Ronald Bagnall for proof reading parts or all of this manuscript.

The research described herein is entirely my own,
and the thesis has been composed by myself.



This thesis is dedicated to my husband Ron
with love and gratitude

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GENERAL INTRODUCTION

1 OVERVIEW

Alcohol and its mind altering qualities have been enjoyed by human societies throughout the world for centuries. This is acknowledged in the Bible:

> 'Give strong drink to him who is perishing, and wine to those in bitter distress: let them drink and forget their poverty and remember their misery no more'
>
> (Proverbs 31: 4-7).

At the same time however, the less acceptable face of alcohol use has been recognised, and appropriate 'warnings' issued for the benefit of those who overindulge: 'Wine is a mocker, stronger drink a brawler; and whoever is led astray by it is not wise' (Proverbs 20:1)

The pessimist might agree that little has changed over time, with the problem of alcohol misuse still prevalent despite enormous progress in medical knowledge, educational techniques and general public awareness of health related issues. It is beyond the capabilities of this thesis to dispel such doubt completely. On the other hand, it is intended to present a balanced view of the current status of strategies for preventing alcohol misuse. In particular, it will be argued that school-based alcohol education has an important and effective role to play in curbing alcohol misuse.

The contribution of education in the context of psychoactive substance use has been noted by Plant et al. (1985):

> 'Education is important. It is important as a symbolic statement that society is concerned about alcohol, tobacco and illicit drug problems. It is important that available knowledge should be disseminated as widely as possible. Young people, the population at large, those in the 'helping professions', journalists and politicians are all legitimate and important target groups for health education'.
>
> (Plant et al. 1985: 119)

Discussions on the prevention of alcohol misuse inevitably highlight the role of education, often heralded as an obvious panacea to all

society's ills. The term 'alcohol education' means different things to different people. To some it refers to primary prevention, or stopping people from ever developing problems which relate to alcohol consumption. To others, especially clinicians, it may be interpreted in terms of secondary prevention, or arresting misuse which already exists before it becomes chronic or seriously incapacitating. No single programme is likely to meet all needs and expectations. Rather the nature of any alcohol education initiative should be determined by a clear knowledge of the people for whom it is intended. This in turn will indicate the most appropriate education strategy or approach.

2 SCHOOL-BASED ALCOHOL EDUCATION

At the time of writing, the topic of alcohol education generally receives very low priority in the school curriculum in Britain and many other countries. Although some schools have developed their own alcohol education, many others appear to have given little consideration to the topic. Such diversity of provision results largely from the difficulty of slotting health education or alcohol education into the curriculum. As with all other subjects which are not compulsory or formally assessed, school-based alcohol education has to compete for space with other topics in an already well-filled curriculum. The low priority apparently given to alcohol education in this respect cannot be fully explained in terms of poor resources. Some excellent alcohol education materials are available to schools throughout the United Kingdom. These include an alcohol education pack for 11 to 16 year olds published jointly in 1984 by the Teachers' Advisory Council on Alcohol and Drug Education and the Health Education Council. Alcohol is also a topic in the health education programme for 13 to 18 year olds produced by the Schools Council and the Health Education Council (1984) with additional support from the Scottish Health Education Group and the Transport and Road Research Laboratory. However, the uptake of such resources appears to be limited. Educationalists often attribute this to the high cost and/or considerable time requirements. This is especially true when in-service training is a necessary precondition of using an alcohol education package with young people in schools.

The situation in Great Britain contrasts sharply with that in some other countries. For example, in the Scandinavian countries, alcohol education is an integral part of the compulsory school curriculum. In addition, the school-based resources there are backed up by parallel campaigns in the community, thus reinforcing the educational message. In the United States, the education system is less centralised than in Britain and some other European countries. Nevertheless many American schools include sophisticated alcohol education materials in their curricula.

Bearing in mind the problems facing school-based alcohol education in Britain, the research for this thesis set out to examine whether it was possible to develop an alcohol education package which would be of practical value to teachers and which would be demonstrably effective. In order to clarify the perceived needs of the potential 'consumers' of such a resource, the Alcohol Research Group at Edinburgh University conducted a pilot study in 1984. This exercise involved a postal survey of all local education authorities in the United Kingdom, and was aimed at directors of education and senior advisers. The results of this pilot study showed that a large majority of senior educationalists were in favour of some kind of alcohol education in secondary schools. However it was also apparent that for any such education to be practically useful, it would have to be short, inexpensive (ideally free) and easy for teachers to use without inservice training or extensive preparation time. These constraints have been incorporated into the present study.

3 THE PRESENT STUDY

The alcohol education initiative which forms the basis of this thesis is a primary prevention programme. It is a school-based intervention, targeted at all 12 to 13 year old pupils and taught in the school by class teachers. An alcohol education package was developed which was designed to be acceptable to teachers in terms of the constraints identified in the pilot study. The materials therefore had to be easy and attractive for teachers to use, demanding little in terms of preparation time or cost. These materials were designed to help young people begin to develop responsible use of alcohol. The content emphasises issues identified as particularly relevant to the target age group.

The principal aim of the study was to evaluate scientifically whether such an alcohol education package could be effective. The thesis describes the study and its results. Chapter one sets the project in the broad context of health education while Chapter two reviews the literature on the effectiveness of primary prevention programmes in curbing misuse of psychoactive substances among young people. In subsequent chapters, details will be given about how the study was conducted in schools, and the outcome of this evaluation research will be discussed. The implications of the findings will be considered not just in terms of school-based alcohol education, but in the broader context of health education for young people.

CHAPTER 1

ALCOHOL CONSUMPTION AND HEALTH RELATED BEHAVIOUR

The first part of this chapter assesses the need for alcohol education against a background of information on levels of alcohol consumption. The remaining sections examine some theories of substance use and their implications for prevention programmes.

The first section will examine patterns of alcohol consumption in the general population, and will identify some of the factors which may influence individual drinking habits. The focus will then be placed on young people and drinking, and some possible explanations of why people use and/or misuse psychoactive substances will be considered. The role of these explanations will be examined in the context of theoretical models of health related behaviour, emphasising the implications for primary prevention strategies. Finally, some consideration will be given to the kind of assumptions which underlie the development of preventive programmes.

1.1 ALCOHOL CONSUMPTION IN THE UNITED KINGDOM

In the United Kingdom, as in many other countries, alcohol is a legal drug, readily available and relatively inexpensive. It also plays an integral part in a wide range of social rituals, such as christenings, weddings and funerals. More generally, alcohol serves as a widely acceptable symbol of celebration, or simply as a social lubricant. In the context of this apparently widespread popularity, official statistics can provide objective information about the levels of alcohol consumption in the United Kingdom, enabling comparison of trends over time.

1.1.1 Consumption levels

Historical data suggest that consumption of alcohol in the United Kingdom has been at much higher levels in the past. For example, statistics from 1680 indicate an average beer consumption of 16.1 pints per

person per week. The comparable figure for 1975 was roughly one quarter of this (Spring and Buss 1977).

More recent figures suggest that since 1960, total alcohol consumption in the United Kingdom has undergone a slow but steady increase. This is illustrated in Table 1.1 below.

Table 1.1 U.K. Consumption of Alcohol

(Sources: H.M. Customs and Excise and Office of Population Censuses and Surveys)

Year	Alcohol consumption		Percentage share by type of drink based on alcohol content			
	Pints per head	Litres per head	Beer	Cider	Wine	Spirits
1960	7.6	4.3	73.5	1.6	7.7	17.2
1961	8.0	4.6	73.7	1.6	7.9	16.9
1962	8.0	4.5	73.3	1.4	8.1	17.2
1963	8.1	4.6	72.0	1.4	8.9	17.7
1964	8.6	4.9	71.3	1.4	9.3	18.1
1965	8.2	4.7	72.0	1.5	9.1	17.4
1966	8.5	4.9	72.3	1.6	9.2	17.0
1967	8.6	4.9	71.3	1.7	10.0	16.9
1968	8.8	5.0	70.3	1.7	10.8	17.1
1969	8.9	5.1	72.2	1.9	10.1	15.8
1970	9.3	5.3	70.4	2.0	10.4	17.2
1971	9.8	5.6	69.4	1.9	11.3	17.4
1972	10.3	5.9	67.3	1.8	12.1	18.8
1973	11.5	6.5	63.3	1.8	13.6	21.4
1974	12.0	6.8	61.9	1.7	13.7	22.7
1975	12.0	6.8	63.8	2.0	12.6	21.6
1976	12.3	7.0	62.4	2.3	11.9	23.5
1977	12.1	6.9	64.7	2.2	12.6	20.5
1978	13.1	7.5	61.5	2.0	13.6	22.9
1979	13.6	7.7	59.8	2.0	13.8	24.4
1980	12.8	7.3	59.1	2.1	14.5	24.3
1981	12.4	7.0	58.2	2.4	15.5	23.9
1982	12.2	6.9	58.3	2.9	15.9	22.9
1983	12.7	7.2	58.2	3.1	16.2	22.5
1984	12.6	7.2	56.6	3.1	17.9	22.5
1985	13.0	7.4	56.0	2.9	17.8	23.3
1986	12.9	7.4	55.7	3.0	18.1	23.2
1987	13.3	7.5	55.7	2.8	18.5	23.0
1988	13.4	7.6	55.5	2.7	18.1	23.7

Total alcohol consumption includes cider and so differs from Table K8 where cider is excluded.

(Brewers' Society 1988)

The exception to this trend was in the period 1979-82 when there was a sharp drop in consumption. This corresponds to a temporary increase in the real price of alcohol during a general economic recession. Consumption has been slowly increasing since 1982, and the level for 1988 has still not reached the peak of 13.6 pints per head recorded in 1979.

Overall, the total amount of alcohol drunk by the adult population in the United Kingdom has increased considerably between 1960 and 1988. This increase, however, has not been consistent for all types of alcohol. As the right hand columns in Table 1.1 illustrate, the increase in consumption has been much greater for wines and spirits than it has been for beer and cider.

Comparison with levels of consumption in other countries is shown in Table 1.2 which illustrates the alcohol consumption figures, per head of population, for forty-five 'leading' countries world-wide, from 1970 to 1987.

From this it can be seen that in 1987 the United Kingdom ranked about half way down the table in twenty-second position, with consumption levels consistently lower than many other countries in the world. Even if comparison is restricted to European countries, the per capita consumption for the United Kingdom falls below that of many other countries. Within the European Community, only the Republic of Ireland drinks less than the United Kingdom. (This excludes Greece, because the statistics from that country do not include spirits, thus making comparison impossible). During the period illustrated in Table 1.2, France held the 'top' position in the league with the highest recorded levels of alcohol consumption. However, it should also be noted that, unlike other European countries, the figures from France illustrate a steady downward trend.

Table 1.2 Alcohol Consumption per Head in Leading Countries.

Litres per head of 100% alcohol

	1970	1975	1980	1982	1983	1984	1985	1986	1987
Argentina	..	..	11.5	10.1	10.0	9.5	8.9	9.1	8.9
Australia	8.2	9.5	9.5	9.7	9.5	9.4	9.3	9.1	8.8
Austria	10.5	11.1	11.0	9.9	10.2	10.0	9.9	10.0	9.9
Belgium	9.0	10.0	10.8	10.7	10.6	10.7	10.4	10.1	10.7
Brazil(beer and wine)	0.7	1.0	1.3	1.5	1.4	1.4	1.4	1.9	1.9
Bulgaria	6.7	8.2	8.7	9.0	8.8	8.9	8.8	9.3	8.9
Cameroon	..	..	..	..	..	..	..	..	..
Canada	6.5	8.4	8.7	8.4	8.1	8.0	7.9	7.8	8.0
Chile(beer and wine)	5.8	5.4	6.5	6.2	5.4	5.5	5.6	5.6	5.2
China	..	..	..	..	..	..	..	..	..
Colombia(beer only)	1.7	1.6	2.2	2.3	2.6	2.5	2.8	2.6	..
Cuba	1.7	1.8	1.2	1.3	1.3	1.3	1.3	1.4	1.5
Czechoslovakia	8.4	9.2	9.6	9.8	9.6	9.5	9.4	9.0	8.6
Denmark	6.9	9.0	9.5	10.2	10.6	10.3	9.7	9.9	9.6
Finland	4.5	6.3	6.4	6.4	6.5	6.6	6.7	7.0	7.1
France	17.4	17.1	15.9	15.3	14.9	14.2	13.7	13.7	13.0
German D.R.	6.1	8.0	10.1	10.4	10.5	10.2	10.3	10.5	10.5
German F.R.	10.3	11.3	11.4	10.9	11.0	10.7	10.8	10.5	10.6
Greece(beer and wine)	5.3	5.3	6.7	6.8	6.8	6.8	6.8	6.2	5.4
Hungary	9.6	10.7	12.5	12.3	12.3	12.4	12.2	11.1	10.7
Ireland, Rep. of	5.8	7.3	7.4	6.7	6.1	6.2	6.6	6.6	5.4
Italy	14.2	13.2	12.3	12.4	11.7	11.5	11.0	10.0	10.0
Japan (includes saki)	4.9	5.4	5.7	5.8	6.2	6.2	6.1	6.2	6.3
Kenya	..	..	..	..	..	..	..	..	..
Korea, Rep. of	..	..	..	..	..	..	..	..	..
Mexico	2.2	2.4	2.9	2.9	2.7	2.6	2.8	3.5	1.8
Netherlands	5.6	8.8	8.8	8.6	8.9	8.6	8.5	8.6	8.3
New Zealand	6.4	7.9	8.1	8.3	7.8	8.2	7.9	8.3	8.3
Nigeria	..	..	..	..	..	..	..	..	..
Peru	2.4	3.5	4.6	4.5	4.5	4.4	4.6	4.9	2.2
Philippines	..	..	4.0	4.1	4.2	4.0	3.7	3.8	..
Poland	5.4	7.3	8.7	6.4	6.5	6.2	6.7	6.9	7.2
Portugal	9.8	13.1	10.0	11.8	13.4	12.4	12.9	11.2	10.5
Romania	6.1	7.6	7.9	7.6	7.7	7.7	7.7	5.4	7.6
South Africa	3.0	3.6	3.8	4.3	4.3	4.3	4.2	4.0	4.4
Spain	12.0	14.2	13.2	12.4	12.5	10.8	11.5	11.7	12.7
Sweden	5.8	6.4	6.4	5.6	5.3	5.3	5.3	5.7	5.4
Switzerland	10.3	10.2	10.6	11.1	10.9	10.9	10.9	10.7	11.0
Taiwan	..	..	..	..	..	..	..	..	..
Turkey	0.5	0.8	0.7	1.1	1.2	1.1	1.0	1.0	1.0
USA	6.9	7.7	8.2	8.1	8.0	7.8	7.7	7.6	7.6
USSR	6.5	6.0	6.2	6.0	6.1	6.7	5.7	3.5	3.2
Yugoslavia	7.9	8.1	7.8	8.2	8.1	8.1	7.7	8.1	7.6
Venezuela	2.5	2.5	3.8	3.7	3.6	3.6	3.1	3.1	3.7
Zaire (beer only)	0.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5.	..
UK	5.2	6.6	7.1	6.7	7.0	7.0	7.2	7.1	7.2

(Brewers' Society 1988)

Official statistics such as those illustrated in Table 1.2 suggest that less alcohol is drunk by adults in the United Kingdom than in many other countries either in Europe or world-wide. This could perhaps be

interpreted as an indication that there is no real need to educate people in the United Kingdom about alcohol. However, the statistics reported in Table 1.1 indicate that despite this apparently favourable comparison, there is no justification for complacency. Adults in the United Kingdom now drink more alcohol than they used to, albeit in a different kind of alcoholic beverage. Furthermore, there is confirmation in the Reports of the Royal College of Physicians (1986) and the Royal College of General Practitioners (1986) of 'the general view that alcohol related social, medical and economic problems have been rising over the post-war period' (Jackson 1989: 75).

1.1.2 Social Costs of Alcohol Misuse

The social costs of alcohol misuse have been estimated by health economists, but as they themselves have noted, the resulting figures, while clearly placing a burden on society, can only be regarded as an estimate. In addition to the tangible costs of alcohol misuse such as occupancy of hospital beds and more general use of health service resources, there are many areas where accurate measurement is difficult, if not impossible. Alcohol, for example, is known to contribute to many accidents in the home and in the workplace, and to levels of absenteeism and reduced efficiency at work. Even more difficult to quantify is the cost of personal distress arising directly and indirectly from alcohol misuse.

The direction in which these estimates of costs may err, however, is not universally accepted. McDonnell and Maynard (1985) have argued that the calculated costs can only be regarded as a 'conservative estimate'. On the other hand, it has been suggested that the economic costs of alcohol abuse calculated by the National Institute on Alcohol Abuse and Alcoholism in the USA are inaccurate and 'continually overstate actual costs'. The major explanation for this is seen to lie in the 'attribution of causality to alcohol where none has been shown to exist, and improper methodology with regard to productivity impairment measures' (Heien and Pittman 1989: 567). Clearly this is an issue which will continue to be difficult to resolve.

As noted elsewhere (e.g. Royal College of General Practitioners 1986; Anderson 1989) the precise relationship between public controls on

the availability of alcohol, levels of consumption and the extent of alcohol related problems is a complex and controversial issue.

1.1.3 Alcohol Control Policies

A variety of strategies has been proposed to curb the extent of alcohol misuse and alcohol related problems in the United Kingdom. Tether (1989) has classified the wide range of policy responses into three broad categories.

The first of these emphasises the links between rates of alcohol problems and levels of consumption. This perspective recommends that the availability of alcohol should be controlled by means of fiscal policies such as price regulation through taxation and liquor licensing restrictions. However the effect of such controls on levels of consumption and alcohol related problems is unclear (Duffy 1989). Levels of consumption in a general population form a spectrum ranging from very light drinkers at one extreme to very heavy drinkers at the other. The proportions of light, moderate and excessive drinkers will vary over time, and this has implications for overall levels of alcohol related problems. Control policies at this level need to take account of the patterns of alcohol use within the general population. On the other hand, Kreitman (1986) has argued in favour of a health education strategy which has an overall aim of reducing alcohol consumption levels throughout the general population. Even if 'problem drinkers' were less likely than others to adopt the necessary changes (and this cannot be assumed) he argued that 'if the large, low-risk majority indeed halved their intake the gains would be so extensive as to more than offset the casualties continuing to be generated by the unreformed heavy consumers' (Kreitman 1986: 362).

The second category of response proposed by Tether focuses on problem drinkers, rather than on the product for consumption, and advocates policies which promote intervention amongst those perceived to be at risk from excessive consumption.

In his third category of policy response Tether focuses on current attitudes and patterns of drinking. This approach acknowledges issues such as drinking for effect or to ease difficult relationships or situations. Unhealthy attitudes are associated with the belief that alcohol consumption

is an integral part of all social occasions, that intoxication is acceptable, and can even excuse behaviour which would otherwise not be tolerated. The preventive aim implicit in this approach is one which stresses the need to increase knowledge of the effects of alcohol and to encourage moderate drinking.

Despite the different assumptions underlying each of these three approaches, Tether emphasises the importance of an integrated response which incorporates strategies from the full range of possibilities. It will become evident in subsequent chapters that the kind of educational response to alcohol misuse discussed in detail in this thesis can be most accurately classified in the third of Tether's three categories.

The discussion in this section has highlighted the fundamental problem of defining alcohol misuse. In a clinical sense, such misuse would be defined in terms of chronic illness arising from long-term excessive consumption. Acute problems however can result from the short-term consequences of consumption and intoxication. Furthermore, alcohol consumption which is construed by a concerned parent as 'misuse' may be perceived as perfectly acceptable by teenage offspring. For the purpose of this thesis, the term 'alcohol misuse' will be taken to indicate consumption behaviour which is inappropriate to its context. For young people, this is especially likely to refer to situations where drinking poses a threat to safety.

1.2 FACTORS INFLUENCING THE USE OF ALCOHOL AND OTHER DRUGS

In order to prevent the misuse of alcohol and other psychoactive substances, it is necessary to have some ideas about why they are used, and the patterns of use. This is a complex task. Popular stereotypes of the 'lager lout', 'the drug addict', or the 'alcoholic' are commonplace, and reinforced by the media. Such stereotypes have great 'comfort value' (Cohen 1980) in that they isolate socially 'deviant' behaviours by creating exaggerated and remote scapegoats, who can subsequently take the blame for all kinds of social problems. The validity of such stereotypes, however, is open to question. In 1982, a Government Report noted that the majority

of 'addicts' or individuals with drug problems are relatively stable people who do not exhibit any uniform personality characteristics (Department of Health and Social Security 1982). Three years later, a Home Office Report concluded that drug misuse cannot be explained in terms of any single cause or identifiable combination of factors (Home Office 1985).

The complex aetiology of alcohol and other drug use has been the focus of a considerable amount of research, which has identified a confusing and contradictory array of factors which influence the use of psychoactive substances (Fazey 1977, Plant 1981, Peck 1982). These influences have been shown to operate at all levels, from social policy to individual characteristics. The next section will consider some of these influences in the specific context of alcohol consumption.

1.2.1 Economic Factors

The role of economic factors in alcohol consumption has already been briefly acknowledged. There is some evidence from the United Kingdom that as the real price of alcohol (to the consumer) decreases there is an increase in consumption and alcohol related problems (Royal College of Psychiatrists 1986; Sales et al. 1989). However as noted above, the overall effect of fiscal policy on levels of alcohol consumption and harm is unclear.

Other economic factors such as personal income and employment status have been associated with the pattern of alcohol use amongst adults. A number of population surveys have demonstrated that respondents who were unemployed were more likely to be heavy drinkers (Crawford et al. 1987). It is not clear, however, whether unemployment leads to heavy drinking, or vice versa (Winton et al. 1986).

1.2.2 Social Factors

A variety of social factors have been shown to have an important influence on the way individuals use alcohol. Amongst these, one of the most controversial issues is the influence of alcohol advertising. Grant and Ritson (1983) reviewed some of the available research on this complex issue, and concluded that while alcohol advertising does affect brand choice, its influence on overall consumption is less clear. They also noted that total

prohibition on such advertising, while adding credibility to government concern about alcohol misuse, could be perceived as a threat to individual freedom.

In the context of young people, more recent research suggests that despite the restrictions which operate on alcohol advertising, these advertisements still capture the attention of young people. A study of 10 to 16 year olds in Glasgow schools (Aitken et al. 1988) examined which aspects of advertisements (not just those for alcoholic products) held particular appeal for this age group. These were found to include humour, colour and music which, it is argued, are often found in alcohol advertisements. More specifically, the authors concluded that for this age group their findings 'suggest that advertisements for alcoholic drinks become increasingly salient and attractive' (Aitken et al. 1988: 1).

However, social images of alcohol are not restricted to product advertisements. The portrayal of alcohol in the mass media, especially in television drama, is not subject to restrictive advertising codes, and it has to be noted that at the time of writing, one of the most popular 'soap-operas' on British television is set in a London pub. Hansen (1986) examined the media portrayal of alcohol in a variety of contexts (fiction, news/documentary and advertisements) on the four television channels in the United Kingdom for a period of two weeks. He concluded that overall the drinking of alcohol was presented as natural; there was very little portrayal of negative consequences and the issue of alcohol consumption was seldom discussed. He concluded that such examples were not conducive to learning about the real-life role of alcohol.

The effect of social influences on young people's use of alcohol was examined in depth by O'Connor (1978). This survey comprised approximately 2000 interviews on a sample of Irish, Anglo-Irish and English 18 to 21 year olds, their mothers and their fathers. The sample was chosen to enable the author to investigate the contribution of parental, peer-group, ethnic/cultural and social/personal influences on youthful alcohol consumption. O'Connor found that the most important aspect of parental influence was the attitudes of the parents towards drinking, especially those of the father. This was found to have a greater influence on children's levels of consumption than either parental drinking behaviour or

general family relationships. Similar findings have been reported in several American surveys (Akers 1968; Bacon and Jones 1968; Fontane and Layne 1979; Rachal et al. 1975). In the light of such evidence, it has been concluded that:

> The abstaining adolescent is most likely to come from abstaining parents, the moderate drinker from moderately drinking parents and heavy drinkers, in disproportionate numbers, either from homes where one or both parents are heavy drinkers or from homes where both are abstainers.
> (Gordon and McAlister 1982: 206)

The latter finding also emerged from a survey of 10 to 14 year olds in Scotland, which indicated that children whose parents were total abstainers from alcohol were more likely to indulge in under-age consumption of alcohol (Davies and Stacey 1972).

In O'Connor's study ethnic origin on its own did not explain youthful drinking behaviour. However it was found to have a strong influence on parental attitudes which in turn had a strong influence on offspring's alcohol consumption, as noted above.

Peer group pressure is a further social influence acknowledged to play an important role in the way young people use and/or misuse alcohol. O'Connor (1978) also reported that as the child grows older, friends rather than the family home provide the milieu for drinking. Support from friends for drinking was found to be the most powerful peer group influence, and this was higher for males.

1.2.3 Individual Factors

In addition to the social pressures discussed above, the role of individual factors such as developmental maturity, heredity and personality have been acknowledged (Gordon and McAlister 1982). In the specific context of young people, gender also appears to be an important influence on the use of alcohol. There is considerable evidence from surveys that adolescent males have their first experience of alcohol at an earlier age than their female counterparts. Throughout adolescence, males are also likely to drink alcohol more often than females. This is true not just for youngsters in the United Kingdom (Plant et al. 1985, Marsh et al. 1986, Bagnall 1988) but also in Finland (Ahlström 1987) and the United States

(Johnston et al. 1977). Once again, there is an indication that cultural and peer group influences play an important role in relation to youthful drinking habits. The extent of alcohol misuse involved in these habits will be explored in the next section, with reference to official statistics concerning alcohol related offences.

1.3 YOUNG PEOPLE AND ALCOHOL CONSUMPTION

Although not restricted to under-age drinking, the examples below serve to clarify the extent to which some of the problems associated with intoxication are most likely to be experienced by young people in Britain. In this context a major cause of concern is that of road traffic accidents and vehicle offences. Official statistics in 1985 for England and Wales indicated that the number of drivers and (motor-cycle) riders involved in accidents who subsequently failed breath tests was highest at age 20 to 24 (Home Office 1987). Furthermore, in a report aptly titled 'The Quiet Massacre', Dunbar (1985) noted that of the 1,200 annual fatalities resulting from drinking and driving, 600 were young people in their teens or twenties. The combination of inexperience in driving skills and alcohol misuse can have serious repercussions.

Public concern about alcohol misuse amongst young people motivated the United Kingdom government to set up a special committee in 1986 to examine this issue. The resulting report, 'Young People and Alcohol', argued that under-age drinking must be considered in the context of alcohol misuse throughout society. It also identified some of the main features which distinguish youthful alcohol misuse:

> (i) under-age drinking PER SE has legal consequences for the drinker and supplier;
>
> (ii) under-age drinking involves a particularly vulnerable section of the population;
>
> (iii) whereas for adults society generally takes the view that they should be allowed relatively unrestricted access to alcohol, it is accepted that there should be strict restrictions upon the drinking of the young;
>
> (iv) the young are especially susceptible to the effects of alcohol.
>
> (Home Office 1987: 19)

In line with these features, this report included recommendations for changes in alcohol taxation, stricter enforcement of the laws to curb under-age drinking and severe restrictions on alcohol advertising and sponsorship. Furthermore, a strong plea was made for educating young people about responsible use of alcohol.

In June 1988, a report by the Association of Chief Police Officers called for a detailed study to investigate the problems experienced in policing disorders in non-metropolitan areas, especially those relating to alcohol consumption, popularly referred to as 'rural violence'. This resulted in a Home Office Research Study which combined qualitative data from discussions with young people with survey data. The report concluded that although the majority of young people enjoy 'going out to the pub' at weekends, only a minority subsequently become actively involved in disorder and possibly violence. A clear connection was identified between public disorder and the pattern of weekend entertainment drinking amongst adolescents and young adults in Britain (Tuck 1989). As a response to these findings the report made a number of recommendations. Suggested policy initiatives included increased availability of low-alcohol and non-alcoholic drinks, the introduction of staggered public-house closing hours and of identity cards to reduce under-age drinking. More general recommendations suggested that pubs could improve their image by placing more emphasis on food and soft drink sales, rather than simply functioning as a base for 'knocking back' beer at weekends. At a community level, the report recommended that in areas where disorder is prevalent, community action should consider such issues as relocation of fast-food outlets, or the adequacy of late-night public transport.

The main conclusion which emerges from the discussion in this section is that substance use cannot be viewed in isolation. It occurs, as all social behaviours occur, within a framework of cultural, political and individual factors. As has been noted elsewhere (e.g. Edwards 1974) the effect of any drug is a product of the drug, the user and the environment.

1.4 SOME THEORETICAL EXPLANATIONS OF SUBSTANCE USE

Theories of substance use and their implications for prevention are of limited value unless they take account of the wide range of potential influences identified above. Many theories of substance use and health related behaviour emphasise the relationships between knowledge, behaviour, attitudes and beliefs. Social psychological concepts, especially those relating to learning and socialisation, have played an important role in such theories.

1.4.1 Cognitive dissonance

The theory of cognitive dissonance (Festinger 1957) is based on the idea that we like to think that our attitudes, beliefs and related behaviour form a consistent pattern; in other words, that we behave in accordance with our knowledge and beliefs. When incongruity is detected, dissonance is produced, and action is taken to restore balance. Thus if an individual perceives a lack of harmony between what he does and what he believes, he is likely either to modify his beliefs or change his behaviour. An example of this can be found among physicians who smoke and question the validity of the cancer/smoking link. Substance misuse prevention models based on this theory would recommend the introduction of new beliefs about alcohol and other drugs which challenge existing cognitions. This however does assume a fundamental understanding in any prevention initiative of the knowledge and beliefs which are currently important to the targeted group.

1.4.2 Cognitive and Social Inoculation

A related approach to preventive education is the use of cognitive inoculation, especially in preventing initiation of substance use. This approach (McGuire 1961) not only aims to develop beliefs and attitudes which favour non-use of unhealthy substances, but also encourages participants to discuss the conflicting attitudes which they may encounter. This theory has been summarised as follows:

> The theory, in essence, proposes that a host can be inoculated or given immunity against future impending threat or attack (i.e. persuasive arguments, messages) by "forewarning" the host before the attack ensues. Once the host has become familiarised with the attack, has practised resisting it, has been given feedback on the effectiveness of the resistance and has been administered periodic 'booster' components, the host is said to be theoretically immunised against its power to influence specific attitude(s) and/or behaviour(s).
>
> (Duryea and Okwumabua 1988: 23)

It must be noted however, that education based on this theory assumes that the 'host' is unable to resist attack (i.e. persuasive appeal) at the outset and is thus susceptible to its pressure.

Social inoculation theory, which is an extension of McGuire's cognitive inoculation theory, goes beyond individual cognitions about substance use to include social influences such as peer group pressure. Programmes based on this kind of theory are likely to include as a principal component the development of skills to resist these social pressures.

1.4.3 Social Learning

The social learning theory of Bandura (1977) has also made an important contribution to models of preventive education. As part of this theory, Bandura identified the importance of role models in shaping individual behaviour. The application of this to preventive education has been in the use of peer models, especially 'ideal' or older peers, to depict desirable health related behaviours.

1.4.4 Developmental Theory and Adolescence as a Period of Transition

Many psychologists have viewed adolescence as a period of transition involving rapid physical change and role conflict as the child 'develops' into an adult. Erikson (1968), for example, sees adolescence as a period of identity formation, during which the integrated adult personality is achieved. During this period, self-image is of crucial importance, and the adolescent characteristically explores a wide range of subjective experiences, which may include experimenting with substances. In the specific context of alcohol related behaviour, adolescence has been identified in several studies as the period during which youthful consumption becomes a peer

group activity rather than one restricted to a family setting. This has resulted in many prevention programmes targeted at adolescents, with the focus on what are perceived to be the key risk factors for young people.

1.4.5 Problem Behaviour Theory

This social psychological theory of Jessor and Jessor (1977) focuses on the inter-relationship between three 'systems' - *personality, behaviour and perceived environment.* The theory emphasises the attribution of meaning to specific actions within the behaviour system. It is the function of these actions for the individual which links behaviour to its conceptual determinants in the personality and perceived environment systems. Problem Behaviour Theory acknowledges many of the factors noted above, in that substance use behaviour is seen to be influenced by personal factors such as attitudes, beliefs and 'cognitions' in addition to social learning through modelling and reinforcement. However it is the elucidation of the subjective values attached to environmental factors which arguably gives Problem Behaviour Theory its strength (Funkhouser and Amatetti 1987). The Jessors' theory has been substantiated by empirical research which suggests that teenage drug use is associated with high tolerance of deviance, low expectation of academic achievement and high value on personal independence. In addition, drug use and other problem behaviour has been associated with the adolescent's perception of parental or peer values and behaviour in relation to drug use. Problem Behaviour Theory is characteristic of social psychological theories which are based on the assumption that most social behaviours, including those relating to health and substance use, are largely a result of rational, if not necessarily conscious, decision-making processes (e.g. Fishbein 1980, Ajzen and Fishbein 1980, Triandis 1980).

1.4.6 Theory of reasoned action

In the theory of reasoned action (Fishbein 1980) conscious decisions about whether or not to engage in a specific behaviour (such as, for example, drinking alcohol in public) are termed behavioural intentions. These intentions mediate between the attitudes that individuals hold and their actual behaviour. The more positive the attitude, the more positive the behavioural intention will be and the greater the likelihood of that

behaviour being carried out. Behavioural intentions are not, however, predicted by attitudes alone, but by a combination of attitudes, norms and motivations (Crawford 1987a). According to the theory a 'person's intention to engage in any given behaviour is a function of a weighted combination of two basic determinants, one personal in nature and the other reflecting social influence' (Fishbein and Middlestadt 1987: 365). The personal component refers to the individual's attitude - whether he feels positive or negative about performing the specific behaviour. The second component is termed the 'subjective norm' and reflects whether or not the individual perceives that 'important others' would approve of the behavioural intention. This component incorporates a motivational element in terms of compliance with the norm. Empirical data from survey questionnaires have identified high levels of consistency between self-reported measures of behavioural intentions and substance use (Grube and Morgan 1986). These authors, however, cautioned that performance may not always be predicted by intentions. They argued that any behavioural outcome depends on possession of appropriate knowledge and skills combined with an opportunity to engage in that behaviour. If these are not present, then the intention may not be realised as a behavioural outcome. In the context of substance use, application of this theory as a means of explaining and, more significantly, changing behaviour assumes a knowledge of the salient beliefs in the population of interest. The identification of these is not easy, especially given the emphasis on the specific context and time of any behavioural intention and outcome (Fishbein and Middlestadt 1987). This focus on single behaviours, especially the dependence on appropriate circumstances for translation of behavioural intention into behaviour, poses limitations on the application of the theory of reasoned action to generalised preventive education.

In this section, the strengths and weaknesses of alternative theories of substance use have been discussed, with specific emphasis on their application to prevention. These ideas will be expanded in the next section, which considers how models of health related behaviour can assist in the process of developing approaches to health education, and substance education in particular.

1.5 MODELS OF HEALTH RELATED BEHAVIOUR

1.5.1 The 'Epidemiological Triangle'

One such model is the 'epidemiological triangle' proposed by De Haes (1987). This model provides a 'balanced view' of some of the main factors postulated to determine psychoactive substance use. This is illustrated in Figure 1.1.

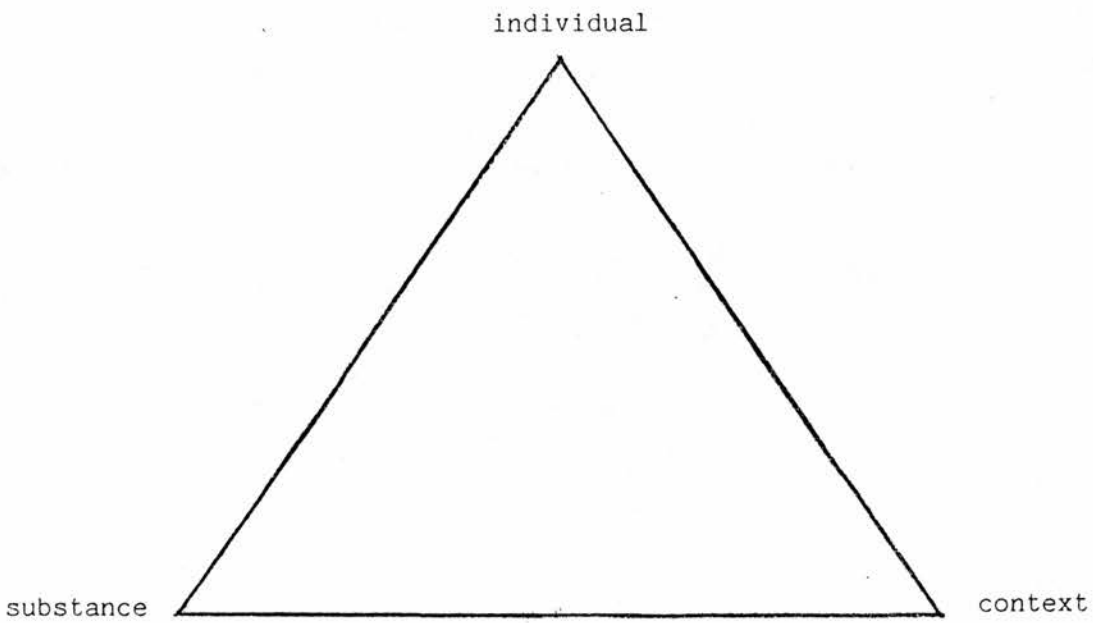


Figure 1.1 The Epidemiological Triangle

Although outwardly simple, De Haes' model clearly identifies the permanent interconnections between the three principal influences - the individual, the substance and the context. As a tool to assist the development of drug education, this model or explanation of drug related behaviour clearly suggests that educational programmes based on individual factors in isolation are unlikely to be effective because they do not take account of either the specific drug or of the context of its use. The same prediction of ineffectiveness would hold for a programme which is merely drug based. Such predictions have indeed been supported and the evidence will be elaborated in the next chapter.

1.5.2 The Health Belief Model

An alternative model of health related behaviour is Becker's Health Belief Model (Becker 1974, Rosenstock 1990). Although this originated as a model of how individuals take action to avoid disease, it has significant implications for substance use and its prevention.

In the Health Belief Model, health related action is seen to be dependent on two conflicting sets of variables - perceived benefits and barriers. The benefits depend on the individual's perception of his or her susceptibility (to a disease) and its potential severity, and on the availability and efficacy of various courses of action. The barriers to taking action refer to individual perceptions of the action itself - for example its cost or convenience; whether it might be painful or embarrassing. The resultant action is the outcome of a 'cost/benefit analysis', which clearly has a strong cognitive component.

Empirical data have provided support for the predictive validity of Becker's Health Belief Model, although this is limited to adult populations (Kirscht 1988). In studies of the uptake of polio vaccination, for example, Rosenstock et al. (1959) found that the major source of variance was accounted for by perceived susceptibility, perceived severity and perceived benefit in terms of the safety and effectiveness of the vaccine.

More recently, however, Rosenstock (1974) has questioned the assumption in such retrospective studies, that beliefs about perceived susceptibility, severity and efficacy pre-date the behaviour with which they are subsequently associated. As would be predicted by cognitive dissonance theory, the individual's retrospective perception of these beliefs may be modified by the adoption of the related health action. Rosenstock also suggested an additional factor to the model, to take account of cues to action. He proposed a two dimensional factor - an internal psychological dimension which determines the individual's state of readiness to take specific action, and an external dimension such as the impact of a particular health promotion campaign.

More recent studies using both retrospective and prospective data have shown that the benefits and barriers of the Health Belief Model are important predictors of change in health related behaviour (Janz and

Becker 1984). In the context of alcohol education for young people, increasing knowledge about alcohol could be viewed as having potential impact on perceived susceptibility and severity. Objective information about the effects of alcohol on subsequent behaviours could be seen as a necessary component of the cost/benefit analysis underlying a decision to take a particular course of action. For example, a decision to make every second drink non-alcoholic could be influenced by knowledge of the effects of alcohol on co-ordination and judgement.

1.5.3 The Health Action Model

The third model of health related behaviour to be discussed here is the Health Action Model (HAM) which is illustrated in Figure 1.2. This was proposed by Tones (1987), and arguably combines the strengths of the explanatory theories and models already discussed.

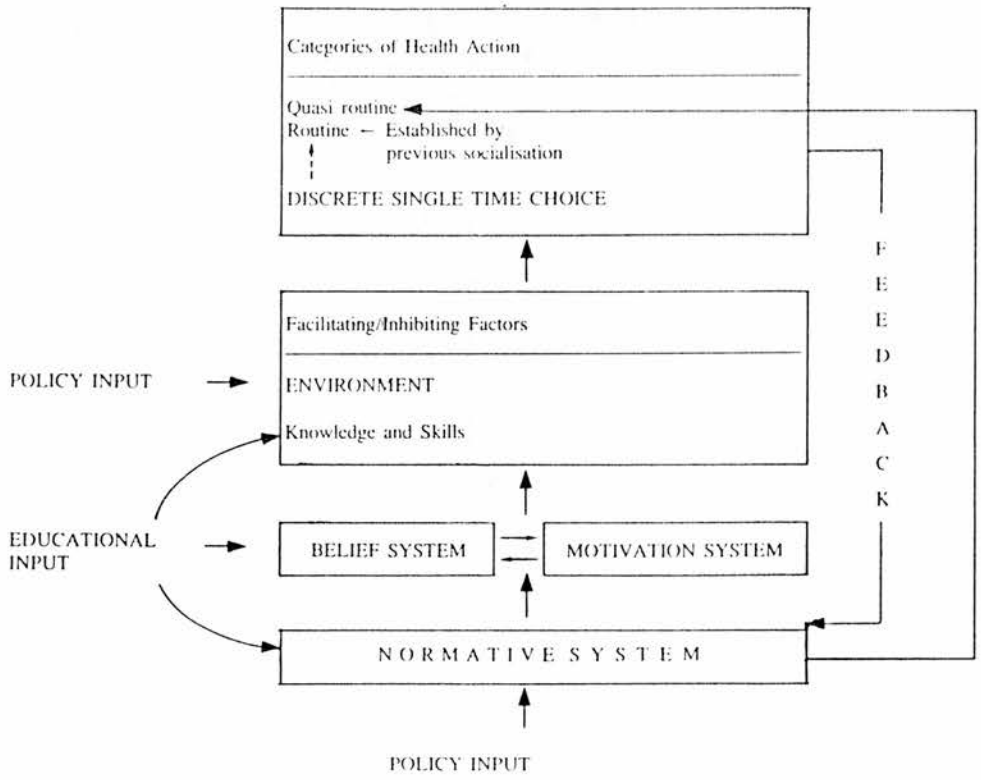


Figure 1.2 The Health Action Model: an overview

With its acknowledged roots in Fishbein's theory of reasoned action, the Health Action Model highlights the interrelationships between knowledge, beliefs, motivations and behaviours. As in Becker's Health Belief Model, the HAM acknowledges factors which may inhibit action as well as factors which may facilitate it. These are identified at various levels ranging from individual ignorance to cultural belief systems and government policy. A school-based alcohol education initiative cannot be expected to change global environmental variables outwith individual control, especially in a short intervention. Nevertheless, a programme based on this model, by combating individual ignorance, could also begin to tackle inappropriate cultural belief systems.

A major strength of Tones' Health Action Model is its emphasis on the role of feedback in health related decisions, and the influence of this on behavioural intentions via the motivation system. Tones has illustrated this mechanism with the example of the craving for tobacco experienced by 'ex-smokers'. This physiological drive, he has argued, may motivate the individual to change the behavioural intention to cease smoking, resulting in a relapse. In this way feedback plays an important role in the maintenance or otherwise of any chosen health related behaviour.

1.5.4 Summary and Conclusions

It is difficult to sum up these various theories and models succinctly in terms of their implications for alcohol education. What is clear is that they all highlight the complex interplay of environmental and individual factors which results in substance use. Problem Behaviour Theory and Fishbein's Theory of Reasoned Action stress the rationality of such behaviour and the importance of its perceived function for the individual. De Haes' Epidemiological Triangle highlights the need for prevention programmes to address the use of specific substances in the context of the user and the environment. The specific nature of individual action in relation to substance use is emphasised both in Becker's Health Belief Model and Tones' Health Action Model, implying a need for specific prevention strategies for specific target groups. These two models of health related behaviour would also indicate a requirement that substance related knowledge should be part of an educational programme, in order to remove some of the perceived barriers to health behaviours, and to

enhance rational choices of action. They would also suggest that knowledge on its own is insufficient to change behavioural intentions or subsequent behaviours. Behaviour change is most likely to result from appropriate behavioural intentions which themselves have been created or modified via the motivation system and more broadly by the feedback system. The HAM also implies that translation of a behavioural intention into an action depends not just on knowledge and beliefs, but on possession of appropriate skills, suggesting that these should also be a target for educational intervention.

1.6 DEVELOPING ALCOHOL EDUCATION - SOME UNDERLYING ASSUMPTIONS

The preceding sections, by identifying the complexity of health related behaviour, have begun to address the difficulties of developing effective preventive or harm minimisation measures. Narrowing the context from health education in general to alcohol and other drugs does not automatically reduce those problems. Here too, it would seem unlikely that programmes could be devised which readily counteract the range of factors which influence such behaviour. It could be argued that these difficulties are further compounded in alcohol education by the social acceptability of alcohol consumption. In the particular case of adolescence, the ritual passage from childhood to adulthood is frequently characterised by 'learning to drink'. Such behaviour tends to be sanctioned by adults (Grant 1982) and sometimes encouraged in preference to illicit drug use (Hamburg 1989).

Alcohol education, as all health education, must in its broadest sense be viewed as a political issue. Few health educators would disagree that a basic prerequisite of any health education programme is a set of clear objectives, and well-defined procedures designed to achieve them. However the selection of these objectives and procedures will be constrained by ideological perspectives and/or whatever model of health education is adopted.

1.6.1 Individual Responsibility

In Britain, a considerable body of criticism has arisen which questions some of the traditional values and assumptions underlying the conventional approach to much health education. In particular, doubt has been raised about the validity of emphasising individual choice and responsibility in health related behaviour, at the expense of socio- economic factors beyond the control of the individual. Naidoo (1986) has criticised individualistic health education on the grounds that it assumes freedom of choice and denies that health is a social product. Similar arguments have been articulated in a case study of coronary heart disease prevention by Farrant and Russell (1986).

The 'individualistic' approach is sometimes referred to as 'victim blaming' and at its extreme has been equated with the individualism of right wing politics. As an example it could be argued that health issues, such as low-fat diet or reduced alcohol consumption, may be of little interest to individuals living in circumstances of poverty and deprivation. Individual choice in such issues is therefore externally constrained, with political and social status creating barriers to the uptake of 'healthy behaviours'. The HAM takes account of such constraints at the level of policy input, and therefore is capable of explaining the resultant absence of behavioural change in the above example.

1.6.2 Health Education versus Health Promotion

In the context of school-based alcohol education, it is necessary to make a distinction between what is meant by health education and health promotion. Health education has been defined as 'any combination of learning opportunities designed to facilitate voluntary adaptation of behaviour which will improve or maintain health'. (Green 1979: 162). Health promotion is a more broadly based concept which includes the organisational and political interventions required to facilitate the uptake of health related behaviour.

School-based alcohol education, therefore, as the focus of this research, is an example of health education, where exposure to specific learning opportunities is intended to help individuals to adopt healthy behaviours in relation to alcohol use. Health promotion in the context of

alcohol would have to go beyond this to include some of the interventions in the economic and political sphere identified in the preceding sections. Within the terms of the HAM, such health promotional factors have implications for policy input and the feedback loop, which ultimately will influence behavioural intentions. The 'educational input' of the HAM represents the boundaries of the present study.

Having narrowed the focus of the discussion to educational input, the remainder of this chapter will address the specific assumptions of the approach to alcohol education adopted in the present study. The strengths of the HAM identified in this chapter support its appropriateness as a theoretical model on which to base an alcohol education initiative which operationalises the proposed definition of health education.

1.6.3 Self-empowerment

Tones (1986) has argued that in order to achieve a goal of voluntarism and genuine informed choice, social awareness of health risks must be combined with 'self-empowerment'. There is little point in making people more aware of the health risks in their own lives unless they also acquire the means to reduce these risks. The concept of self-empowerment has been explained by sub-division into three main components - *self esteem, locus of control and social skills.* Self esteem can be equated with 'having the courage of your convictions'. Individuals with high self esteem are more likely to behave in a way which is consistent with their beliefs, and hence are less likely to succumb to social pressures which conflict with personal beliefs. Perceived locus of control is associated with the individual belief that personal action is possible, in order to reach a desired goal. Finally, appropriate social skills have to be selected and executed to achieve the intended result.

The balance between these three components of 'self-empowerment' will determine the actual behaviour executed. Even if the desire to behave in a specific way is present along with a belief in the ability to do so, absence of the necessary social skills (for example the assertiveness skills required to resist peer group pressure) will prevent the desired behaviour from being achieved. Change in any one of these components will

therefore be a necessary but not sufficient outcome of any health educational intervention aiming to bring about behaviour change.

This inter-relationship between beliefs, social skills and behaviour is commonly synthesised in the term 'lifeskills', particularly in the context of health or personal and social education in schools and colleges. Tones (1987) has cautioned against indiscriminate use of this popular terminology which, he argues, could be interpreted as a means of social control. Rather, the development of life skills should emphasise personal growth and an increasing awareness of self- determination. This in turn can lead to collective action through pressure group activity, community action or political party membership.

1.6.4 Conclusions and Implications

In the context of alcohol education in schools, this thesis proposes that it is possible to produce materials which can be viewed within such a perspective; that is, one which presents health education as a potential vehicle for social as well as for individual change. An alcohol education package of this kind would aim to increase individual awareness, not simply of the effects of alcohol, but also of the kinds of social pressure influencing its consumption, and of the skills required to deal with this. Such an approach could arguably be the first step towards ultimate social change through collective social action. This argument is reflected in the World Health Organisation's statement that 'education..... has to do with the creation of social awareness. If the political will of the people is to be stimulated then education must play a central part in that process'. (World Health Organisation 1982).

Perhaps such change is underway in the context of tobacco smoking. As will become evident in the next chapter, tobacco education for young people has provided some of the most convincing evidence of effectiveness. Furthermore, although progress often takes time, there is little doubt that cigarette smoking in many countries is much less socially acceptable than it was twenty years ago. In many work places and public areas in the United Kingdom, 'No Smoking' is increasingly the norm, with provision reluctantly being provided for smokers. It can be argued that such social changes have arisen through pressure group activity, itself

escalating through increased public awareness of the health risks of tobacco consumption. Furthermore, these changes are reflected in national statistics, where there is clear evidence that fewer people smoke tobacco regularly. (Goddard and Ikin 1987). This issue will be considered again in the next chapter in the section devoted specifically to tobacco education programmes.

As noted in the Introduction, alcohol education in some form is not a new idea and has been available at least since the days of the Old Testament. Even then, people were aware of some of the risks of alcohol misuse although some of the advice was conflicting. It would appear that simply warning people of these risks has little effect on consumption. The key point is therefore not just to provide information and warnings about alcohol, but to establish a form of alcohol education which can be shown to be effective. Chapter two provides a detailed review of research world-wide which has aimed to evaluate preventive education about substance misuse for young people.

CHAPTER 2

A REVIEW OF THE EFFECTIVENESS OF DRUGS EDUCATION

Much literature is available which reports on the effectiveness of health promotion/education campaigns. Some studies attribute effectiveness merely on the basis that a large proportion of the general public said they were aware of specific campaigns. However there is no evidence to suggest that such awareness on its own is sufficient to bring about change in health related behaviour. More information is required about which particular aspects of a health education programme will most likely lead to change in the appropriate behaviour. Furthermore, such information must be based on carefully designed research, otherwise it is of little practical value.

Chapter one discussed some of the theoretical issues which underlie educational initiatives to reduce problems arising from drugs misuse. However, as has been noted by Davies (1987:303) 'it is not too difficult to find examples characterised by lack of cohesion in terms of theory, and lack of integration in terms of practice'. The broad spectrum of views amongst practitioners about 'how to do' drugs education is compounded by the variety of resources available. These in turn represent a wide range of approaches and philosophies. Such diversity makes it difficult to compare and contrast examples of different programmes, especially with respect to their proven effectiveness in reducing substance misuse. This difficulty is further compounded by the fact that some programmes address only one substance, while others address alcohol, tobacco and illicit drugs. Despite these limitations, this chapter will provide a review of studies which enable some comparisons to be made. The examples will be restricted to school and college based programmes relating to alcohol, drug and tobacco education for young people.

2.1 A REVIEW OF EVALUATION STUDIES

Before reviewing individual studies, a note must be made of the scientific basis of this kind of research. Two basic requirements underlie

studies intended to evaluate the effectiveness of health education. These are (a) pre- and post-intervention measures and (b) a control group. Without these conditions it is not scientifically valid to conclude that a particular intervention has resulted in a particular change of behaviour. Nevertheless, this has not prevented such claims being made, not least in studies concerned with evaluating the effectiveness of educating young people about drugs misuse.

Generally, the literature on the effectiveness of substance misuse education paints a pessimistic picture, suggesting that the majority of programmes are ineffective if not counter-productive (Kinder et al. 1980; Schaps et al. 1981; Bagnall and Plant 1987; De Haes 1987). In a paper reviewing adolescent health care and prevention of disease in the Americas, Hamburg (1989) concluded:

> Research is greatly needed with regard to developmentally appropriate and culturally relevant educational efforts regarding substance abuse. In the United States much of the drug education has been ineffective or counterproductive. There is still a great deal to be learned about linking adolescent cognitive level, motivational structures and active learning techniques with informational content in ways that can catch and hold adolescents' attention and teach them what they need to know to avoid harmful practices and promote health.
>
> (Hamburg 1989: 145)

The role of the school or college in educating young people about alcohol and other drugs has been clearly acknowledged by Benard et al. (1987). Referring to the U.S.A., these authors argue that it is unreasonable to expect schools to counteract a culture which is ambivalent about alcohol and drug use, and which actively promotes such use. However, they also highlight the pivotal role that school plays in the lives of young people, both in the classroom and in school related activities. As a social institution, the school can be seen as an ideal setting for initiatives designed to combat substance misuse among young people. Trained staff are readily accessible, as are large organised groups of the target population. Furthermore, schools afford the opportunity for longitudinal research into effective educational strategies and importantly, as noted by Weisheit (1984) they already have a 'sense of public legitimacy'.

Despite this apparently ideal setting, there is considerable agreement in the literature on some of the major defects which appear to have diminished the effectiveness of school-based substance misuse programmes. (Barnes 1984; Weisheit 1983). These defects include:

- setting of unrealistic goals for programmes
- absence of sound theoretical base
- inadequate attention to prevention principles
- limitations in time and scope
- inadequate implementation

2.1.1 TOBACCO EDUCATION

One context in which the effectiveness of substance misuse education in the classroom has been particularly well documented is that of tobacco smoking. In addition, this appears to be the context which has produced the most convincing evidence of effective interventions.

It was noted in Chapter one that national surveys in the United Kingdom suggested, in the early 1980s, a decline in the prevalence of smoking. It was also evident however, that the decline was accounted for by adults giving up smoking, rather than by young people failing to start (Marsh 1984, Dobbs and Marsh 1985). This was disappointing for health educationalists who had hoped that the decline indicated effective tobacco education. Nevertheless, some tobacco education initiatives around this time were shown to be effective although many, as noted by Gillies (1986), were not evaluated, or if they were they failed to use a control group, pre- or post-intervention measures, or long term follow-up.

Gillies reported on six tobacco education studies in Britain which did include a controlled evaluation method using pre- and post-intervention measures, although only a short-term follow-up was incorporated. Of these six studies, three demonstrated that tobacco education had produced a small effect on tobacco related knowledge of the young target group. Only one of these studies, however, succeeded in

producing evidence for behaviour change as a result of the intervention (Ledwith and Osman 1985). This study differed from the others reviewed in its emphasis on active learning, practical illustrations of the physiological effects of tobacco, and discussion about the influence of tobacco advertising. In her own controlled evaluation study, Gillies adopted a similar approach to tobacco education, with the twofold aim of imparting knowledge about the effects of tobacco and developing some understanding of the various social pressures to smoke. An additional important aspect of the programme which formed the basis of her evaluation was the close involvement of parents. Active parental participation in tobacco education projects in Norway had already been shown to increase the likelihood of preventing youthful uptake of smoking (Aaro et al. 1983). Taught as part of a school science project, the tobacco education intervention in Gillies' evaluation study was partially successful: in some of the participating schools the uptake of smoking was lower amongst pupils exposed to the intervention than amongst controls. However the design of this study did not allow precise conclusions to be drawn about why there was an impact only in some schools, or what particular aspects of the programme had contributed to its effectiveness.

In North America tobacco education would appear to be the first of the substance misuse education contexts to shift away from the conventional fear-arousal approaches, which were seldom shown to have any positive impact. This shift resulted in interventions which took account of the influence of psycho-social factors in smoking, especially amongst young people. Most of the recent programmes based on this approach to health education help students to become aware of the social pressures on them to smoke tobacco, and to develop techniques for resisting these pressures. The two principal methods have included video film as a stimulus to class discussion (e.g. Evans et al. 1978) or peer-led discussion and role-playing (McAlister et al. 1979; McAlister et al. 1980).

Peer tutoring has also been seen as a key factor contributing to the success of a multiple substance misuse programme in the U.S.A. called 'Project SMART' (Johnson et al. 1985). The tobacco component of this initiative was intended to sensitise its audience to overt and covert pressures to smoke, and included attitude inoculation (as described in section 1.4.2) to these pressures. The peer tutoring element involved

selection of either older 'ideal' peers (i.e. good role models, as in socialization theory) or same age actual peer leaders, who were trained to assist in programme implementation. The evaluation of this study incorporated systematic methodology. In relation to its effectiveness as a tobacco education programme, the evidence from Project SMART suggested that the intervention had significantly discouraged the target group from taking up smoking.

Tobacco education formed an important component of the health education initiative in Finland known as the North Karelia Youth Project. This large scale and longitudinal study adopted a social influences approach to tobacco education similar to that in Project SMART and included peer tutoring in its implementation. As well as demonstrating a short term impact in reducing the uptake of smoking, the study produced significant differences between intervention and control groups which remained after four years. (Vartiainen et al. 1986).

Botvin (1982) however has argued that while peer pressure to use/misuse alcohol and other drugs is an important factor, it is not the only explanation. Many young people use psychoactive substances as a way of coping with social or academic anxiety. Botvin therefore advocates that drugs education initiatives must go beyond peer group influence and include the development of skills in personal and social competency. This emphasis on coping skills underlies nine educational programmes which were evaluated and reviewed by Botvin and Wills (1985). All of these programmes focused on teaching general, as opposed to substance specific, personal and social skills. The authors concluded that the 'Life Skills Training' prevention strategy can reduce new cigarette smoking among junior high school students by at least 50%. Although reductions in regular smoking were found one year later, there was some evidence of erosion of the original effects over time. Furthermore, this review of tobacco education evaluation studies suggests that the inclusion of peer-tutoring may not be essential for a successful outcome. Comparison of different implementation procedures suggested that the programme was effective whether implemented by research project staff, older peer leaders or by classroom teachers.

Summary

The examples of tobacco education programmes referred to above, which are generally rooted in socialisation theory, have produced encouraging results . However, there is still disagreement about which specific aspects of these programmes have been effective. In the context of alcohol education, it is also important to note the nature of the outcome measures employed. In the successful tobacco education initiatives, effectiveness was assessed in terms of a significant reduction in the numbers of young people beginning to smoke tobacco. In many alcohol education programmes including the present one, the outcome measure relates to the reduction of misuse, rather than prevention of initiation.

2.1.2 ILLICIT DRUGS EDUCATION

Interventions in the use of illicit drugs have been less successful than tobacco education initiatives. During the early 1980s an experimental study of cannabis education was conducted on 4,000 students at schools in the Province of Ontario, Canada (Smart 1989). The resources made available to schools included videos, written materials and booklets with information about cannabis for young people. These were distributed to students, teachers and parents. The aim of this study was to measure the effect of increased exposure to cannabis education on subsequent levels of use. It did not attempt to clarify the effectiveness of one specific approach to such education. The results suggested that increased exposure to cannabis education was not associated with reduced use of that substance. This highlights the argument that a major consideration in substance use education is to evaluate the effectiveness of specific educational approaches.

A recent review of drug education has been produced by De Haes (1987). It will be recalled that this author proposed the model of substance use behaviour illustrated in 'The Epidemiological Triangle' of Figure 1.1. This model evolved from an evaluation study of drug education programmes for 14 to 16 year olds in Rotterdam (De Haes and Schuurman 1975). The study compared three approaches to illicit drugs education : 1) a warning approach, 2) an information approach and 3) a person-oriented approach. The results of this study led the authors to conclude that

substance based programmes of types 1) or 2) should not be encouraged, as they could increase the incidence of experimentation with drugs. The third approach, however, was effective in reducing such experimentation. From his comprehensive review, De Haes concluded that providing substance-based information is not the most effective method of prevention. Instead he argued that drug use should be presented as 'a fact of life' in the broader context of problems confronting young people.

2.1.3 ALCOHOL EDUCATION

Reviews of educational interventions focusing on alcohol have resulted in conclusions which are similarly negative to those for illicit drug use. For example Grant (1986) concluded from a review of the evaluation of alcohol education in Western Europe and North America that 'past alcohol education has been a spectacularly wasteful enterprise'. Furthermore, he claimed that 'most programmes are directed towards illusory targets and pursue elusive goals' (Grant 1986: 198).

As Gordon and McAlister (1982) have noted, past alcohol education, especially in North America, tended to emphasise the immorality of alcohol consumption, or employ fear tactics. More recently the emphasis has shifted, especially in programmes targeted at adolescents, to focus on the physiological and social consequences of prolonged and heavy alcohol consumption. Such programmes however, are acknowledged to have had little impact on older adolescents, and in some cases, as with illicit drugs education, appear to have increased the likelihood of experimentation with alcohol (Stuart 1974). One frequent explanation for this failure is that predominantly negative, one-sided approaches to alcohol education reduce the credibility of the content to the recipients. Thus although many people drink alcohol, only a small percentage of the general population will experience the problems of heavy and prolonged misuse. Emphasis on this aspect of consumption is therefore outside the personal experience of many adolescents, and certainly has little relevance to their everyday lifestyles.

This issue of relevance and credibility to the target audience has also been raised by Finn (1977) who has criticised the majority of alcohol education resources for failing to acknowledge the significant ways in

which alcohol gives pleasure. He recommended that at least 25 per cent of any alcohol education programme ought to be concerned with the positive aspects of alcohol consumption. At the same time, Finn acknowledged the need to avoid 'stigmatising' abstainers. This, he argued, can be done in two ways - firstly by avoiding any reference, explicit or implied, to *universal* pleasures of alcohol, and secondly by including in 'decision making' activities discussion about reasons for not drinking. The positive aspects of alcohol, and its legal consumption by many people without seriously harmful consequences support the argument that alcohol should be given separate consideration in a generalised drug education programme.

Grant (1982) noted that passive modes of communication were likely to have any impact only on alcohol related knowledge. He also reported that single-lesson programmes were usually ineffective. In recommending sustained interventions, Grant noted that few alcohol education programmes targeted at young people take account of either parents or peers. This led him to argue in favour of an approach which deals with such influences on young people's drinking, rather than one which focuses on the more widely acknowledged problems of drunk-driving and liver cirrhosis.

Some of the difficulties of educating young people about alcohol are highlighted in a recent experimental evaluation in Canada of two linked alcohol education programmes for pupils aged 13 and 14 years respectively (Smart 1989). This study complemented the cannabis education study noted in section 2.1.2. The resources included lesson plans with activities for pupils and information sheets for teachers. Extensive in-service training was provided in advance of the alcohol programme, supplemented with on-going support for staff during the teaching. The implementation of this programme was associated with a decrease in the proportion of drinkers, especially among the younger students. It is important to note, however, that the alcohol education appeared to have little impact on heavy drinkers. This was not a controlled study, and therefore it is impossible to estimate how much the programme itself contributed to these changes in drinking behaviour.

In the U.S.A. a comprehensive alcohol education programme for schools was developed in the 1970's in Seattle, Washington. This curriculum, called 'Here's Looking at You', covers all the school years from kindergarten through to the end of secondary education, and has been used throughout the U.S.A. Implementation of the curriculum requires three weeks per school year, and teachers must attend three full in-service training days with a further annual one-day booster. The curriculum is broadly based on a social psychological model of prevention with the overall aim 'that the student can apply his or her knowledge, through appropriate attitudes and decision-making skills, in making responsible decisions about alcohol use, while using high self-esteem to help resist peer pressures and other temptations'. (Hopkins et al. 1988: 38).

The impact of this programme was evaluated in three contexts:

a) variables related to knowledge, attitudes, self-esteem and decision-making skills

b) measures of alcohol use and misuse, using longitudinal data

c) data concerning the process of implementation.

Data were collected over three academic years from almost 700 students aged 10 to 18 in schools in the states of Washington and Oregon, and a controlled design incorporating pre- and post-intervention measures was employed. However, as Hopkins et al. note, the design has to be defined as quasi-experimental (see Cook and Campbell 1979) since practical constraints precluded true experimental rigour, such as random allocation of subjects to control and experimental groups. Furthermore, the widespread nature of the study meant that not all students received full and consistent exposure to the curriculum as required for rigorous standardisation.

Acknowledging such methodological limitations, Hopkins et al. evaluated both the immediate (2-4 weeks) and longer term (2 year) impact of the intervention. There was no evidence to suggest that exposure to the curriculum had any significant effect on variables thought to mediate alcohol use. In the longer term, use of alcohol also appeared unaffected by the educational intervention. In order to rule out implementation variables

as an explanation for these negative findings, data from students of 'committed' teachers were compared with data from students of the remaining teachers in the project. No differences emerged and the authors concluded that failure of the programme to attain its goals could not be attributed to its implementation. The paper however gives no information on the procedure used, if any, to standardise presentation of the educational programme. Without this detail, it is not possible to assess accurately the contribution of 'teacher effect' to the outcome variables.

The original version of the programme evaluated by Hopkins et al. has been updated to provide a comprehensive alcohol and drug education programme called 'Here's Looking at You-Two'. This new version was evaluated between 1981 and 1983 in six separate studies in north west America, which have been briefly reviewed by Green and Kelley (1989). These authors express serious reservations about the methodological soundness of the six studies, with two having no control group, and three having no pre-test measures. They note however, that all six studies reported statistically significant gains in knowledge as a result of exposure to the programme. Behaviour variables in relation to alcohol were unaffected.

Green and Kelley conducted their own more rigorous evaluation of this programme on 2,700 pupils across five school districts in Pennsylvania, again using a quasi-experimental design. In addition to non-random allocation of subjects to control and experimental groups, the authors also note the difficulty of selecting a sample of schools willing to participate in the project and yet representative in terms of demographic and socio-economic characteristics. A further problem noted was that of potential contamination of the control group subjects. Details of how this affected my own research will be discussed in Chapter four. In Green and Kelley's study, ethical considerations prevented some participating schools from denying the intended control students access to the educational programme. Some districts thus ended up with no control groups, while others were persuaded to withhold exposure until after post-test.

Overall, exposure to the updated version of the curriculum had little impact on students; any significant effects were apparently age-dependent. In the primary education sector, the programme had a

significant effect on knowledge, self-esteem and decision making, but no impact on coping skills. Middle school students demonstrated a significant improvement only in alcohol related knowledge, while the intervention appeared to have no significant impact whatsoever on high school students.

A recent American study evaluated a multiple substance abuse programme amongst seventh grade students (12 to 13 year olds). In this sophisticated study using rigorous methodology, Hansen et al. (1988), compared the effectiveness of two educational approaches - a social influences approach and an affective approach. The social influences programme incorporated many of the ideas discussed above, focusing on influences on substance use such as peer group and other social pressures. The affective programme emphasised 'person-centred' influences and included references to enhancement of self-esteem, decision making, stress management and more general 'coping skills'.

Overall the results of this study indicated the superiority of the social influences approach in preventing the onset of substance use. There was even some indication that the affective education had increased the risk of experimentation. This latter finding led the authors to speculate that the affective education may have presented an unintended message that psychoactive substances can help with coping skills. The social influences approach alone also appeared to have been effective in reducing existing levels of consumption, although this was not significant for all three substances. This investigation demonstrates that specific educational approaches may result in different outcomes for different substances, in this case alcohol, tobacco and cannabis/marijuana.

Summary

The evaluations of alcohol education programmes discussed above highlighted some of the practical problems facing researchers. In the field of alcohol education, as with tobacco and illicit drugs, the findings which are available are inconsistent and difficult to generalise. Both Green and Kelley and Hopkins et al. found a significant increase in knowledge about alcohol in younger pupils, but not among senior grades. Evidence of any impact on personal or behaviour variables was difficult to find, and Green

and Kelley found no subsequent reduction in alcohol consumption. Both these studies emphasised variables such as self-esteem and coping skills as the outcome measures. These in turn were assumed to be causally related to subsequent alcohol consumption. The study by Hansen et al. raises doubts about such emphasis and assumptions, suggesting that social influences should be the focus of alcohol education.

2.2 IMPLICATIONS FOR FUTURE INITIATIVES

Studies such as those referred to above obviously raise questions about the value of pursuing alcohol and drug education initiatives, especially amongst 'normal' adolescent and student populations. However, this negative view may not be justified and pessimism should be guarded. It has already become evident that many so-called 'evaluation' studies have not conformed to rigorous methodological design. Furthermore as Milgram (1987) has noted, critics of drug and alcohol education programmes frequently fail to take account of different evaluation strategies and, perhaps more importantly, of different educational approaches. For example, some evaluations have concluded that the educational intervention actually increased subsequent experimentation with illicit drugs (Swisher 1971; Stuart 1974; Kinder et al. 1980; De Haes 1987). It is important to note however, that such findings have all concerned programmes which focused on substance based information and warnings of dangers. It may therefore have been this specific approach which was counter-productive and not simply drugs education per se.

The examples discussed in this chapter suggest that an alternative approach in some recent studies has produced more favourable results. This approach focuses on those social influences perceived to play a role in substance use, such as peer group pressure, media images or parental expectations. In some studies, the distinction between personal and social variables is not always clarified, sometimes implying a combination of a person-centered and social influences approach. However, those interventions in which the social influences approach has been clearly defined appear to have been effective, particularly in the context of tobacco education. The theoretical foundations of this approach have been

examined in Chapter one, especially with reference to the 'Epidemiological Triangle' and the Health Action Model.

There is also evidence to suggest a need to distinguish between substances. This is particularly true in a school setting, where the substance may well determine the overall objectives. Thus a school-based illicit drugs education programme is likely to have an ultimate goal of total prevention, whereas alcohol education may focus on harm minimisation or risk reduction.

In conclusion, it would appear that broad generalisations cannot be made about how to educate young people effectively about psychoactive drug use. All such educational initiatives must at some point differentiate between substance, programme goals, target group and educational rationale. This is especially important for the purposes of evaluation.

Goodstadt (1986) has reiterated the general ineffectiveness of drugs education programmes, with special reference to North America, and at the same time has lamented the absence of careful evaluation methodology. But rather than provide further reviews of the available evidence, he has tried to identify some of the reasons for repeated failure with a view to recommending future strategies. The difficulty of building on what has gone before in the field of drugs education is emphasised, and is attributed largely to consistently negative findings on effectiveness. Goodstadt has also noted that while some of the more positive outcomes have been associated with increased knowledge, this on its own is insufficient to bring about the intended change in substance related behaviour. He argues that attitudes and beliefs also have a role to play in achieving behaviour change. Goodstadt recommends that careful consideration should be given to the process of implementation, addressing such issues as teacher readiness and time allocation. Related issues include the sequence of introducing education programmes into the curriculum, especially in terms of links with other subjects already being taught. Goodstadt has argued strongly that such programmes must include time 'for the development, rehearsal and reinforcement of newly acquired skills and behaviours' (Goodstadt 1986: 280). The need for careful evaluation is also stressed.

2.3 CONCLUSIONS

Educating young people about drugs is a complex issue which should not be oversimplified. The ways in which young people use alcohol, tobacco and illicit drugs cannot be regarded in isolation from the more general developmental trends and problems of adolescence.

Although some association has been identified between the misuse of alcohol and other drugs (Plant et al. 1985; Bagnall 1988), there is no firm or consistent evidence that drinking during adolescence accurately predicts subsequent adult drinking behaviour. Nevertheless, a longitudinal study in Britain of alcohol consumption between the ages of 16 and 23 found a small but significant association between high frequency and quantity of consumption at 16 and heavy drinking at 23 (Ghodsian and Power 1987). Furthermore, it has been argued that early drinking habits may affect the physiological and psychological maturation of the individual (Gordon and McAlister 1982).

Some authors view the role of adolescence as a crucial aspect of drugs education: 'The objectives related to substance abuse prevention converge with promoting healthy adolescent development; building a society in which people are educated to care more effectively for themselves and for one another' (McAlister 1982: 9). The dangers of isolating substance use from the wider issues of adolescence have been noted by Petersen (1982) who advocated knowledge about adolescent development as a basic prerequisite for any interventions with adolescent health behaviour. Adolescents, she has argued, must be viewed as whole people, not merely as smokers, drinkers or eaters. If the latter approach is used, there is a danger that interventions would simply be 'anti-smoking' or 'anti-drinking' programmes, perhaps originally developed for other target groups. Such an approach fails to take account of the unique circumstances of adolescence which contribute to the smoking and drinking behaviour of young people.

However, this thesis is based on the argument that substance misuse education for young people must make some distinction between different health related behaviours and in particular different psychoactive substances. This is especially true in alcohol education where the

prevention of initiation is not always the ultimate goal, but rather the maintenance of healthy behaviour. Jessor (1982) has recommended high research priority for preventive health education to explore the effectiveness of interventions which combine a 'specific behavior approach' and a 'whole person approach'. The former concerns skills specific to the substance in question, such as resistance to peer group pressure in smoking tobacco or consuming alcohol. The unknown quantity in this approach is the extent to which skills relating to one specific substance will be transferable to different contexts. The second approach is more general and focuses on central change in individuals, such as self-esteem or self-identity, which are assumed to have wide generalised application. The question mark over this approach is whether the broad generalisation of application has any significant influence on specific behaviours. A strategy which combines these two approaches is intuitively appealing since each should counteract the inherent weakness of the other. It is this combined approach which Jessor sees as deserving of high research priority. An approach of this kind to educating young people about drugs misuse would clearly address some of the problems and pitfalls acknowledged in this chapter.

In conclusion, specific reference must be made to the alcohol education project described in the remainder of this thesis, and its theoretical stance in relation to the above discussions. The teaching package developed and evaluated in the study specifically addressed alcohol misuse amongst 12 to 13 year olds, and was therefore substance specific. However it was designed in a way which would enable it to be readily integrated into an overall health education programme, especially one which acknowledges some of the more general problems of adolescence. In this context it could be described as an example of the combined approach recommended by Jessor. The rationale underlying the specific teaching package devised for this study will be explained in detail in Chapter five. Meanwhile, Chapters three and four will focus on the evaluation method, and some of the preliminary findings resulting from the baseline survey.

CHAPTER 3

THE RESEARCH BACKGROUND AND DESIGN

The research was undertaken between March 1986 and March 1989. The main objective was to develop and evaluate the effectiveness of a school-based alcohol education programme for 12 and 13 year olds. The project followed on logically from an earlier Alcohol Research Group study of teenagers in the Lothian region of Scotland. This earlier exercise had involved a survey of young people at two points in time - firstly in 1979 and 1980 when the study group were 15 to 16 years old, and again in 1983 and 1984 when they were 19 to 20 years old - to elicit data on the pattern of use of alcohol, tobacco and illicit drugs. The primary component of the study had been to determine whether knowledge, attitudes and behaviour concerning alcohol predicted alcohol (or other drug) related behaviour four years later. The findings have been described in detail in Plant et al. (1985) and will not be repeated here, other than to note that very little association was found between alcohol consumption at the age of 15 to 16 and four years later. Two points from that study have important implications for the present research. In the context of alcohol education, one of the authors noted in an earlier publication that primary prevention measures have focused on alcohol education despite the absence of favourable evidence regarding its effectiveness (Samuel 1984). However, in their conclusions to the book, the authors argued that there was no justification for rejecting education as a potential response to youthful alcohol misuse. Instead the need was emphasised for further research to include rigorous evaluation of the effect of such education.

3.1 THE FEASIBILITY STUDY

In the light of such recommendations, the Alcohol Research Group conducted a feasibility study to assess what teachers and educational administrators regard as the important features of a worthwhile alcohol education programme. It should be noted that this feasibility study was completed two years before the author joined the Alcohol Research Group, and was not part of the research for this thesis. The information in this

section has been taken from relevant files, and from personal communication with Dr. Martin Plant. It has been included here because of its implications for the current research.

In 1983 a postal survey was carried out in all local education authorities in the United Kingdom, and 125 questionnaires were returned. Overall a favourable attitude emerged towards alcohol education in the secondary school syllabus, with 99 per cent of respondents expressing willingness to implement any new and useful approach to the subject. The major objectives of any such education were perceived to be changes in information (70.6 per cent of respondents), in attitudes (97.8 per cent) and in drinking habits (62.0 per cent). The survey also indicated that for any alcohol education package to be of practical value, it must satisfy certain basic, if somewhat idealistic, criteria. It must be:

a) easy to use and not too long

b) relevant to the target population

c) readily integrated into the existing curriculum

d) inexpensive (ideally free)

e) developed in close co-operation with experienced teachers.

There is a clear parallel between these recommendations resulting from the Alcohol Research Group feasibility study, and those advocated by Goodstadt (1986) as discussed in Chapter two. The questionnaire survey in the feasibility study was followed up by one day conferences on alcohol education in those regional authorities where particular interest had been expressed. These provided qualitative reinforcement for the need to consider the criteria identified above. On the basis of this information, the Alcohol Research Group was in a strong position to develop and evaluate an alcohol education programme. This programme would take account not just of what had been effective (or ineffective) in the past, but also of the needs of the potential consumers i.e. the teachers and other educationalists who would take part in developing and implementing the programme. It is emphasised that the five practical constraints noted above made it unlikely that dramatic results would be achieved by the resultant alcohol education programme.

3.2 THE MAIN STUDY

3.2.1 Aims and Objectives

The principal aim of the main study was to assess the impact of the alcohol education package on the subsequent alcohol related knowledge, attitudes and behaviour of the adolescent study group. The objectives of the study were to test the hypotheses that pupil participation in the alcohol education would:

1) increase knowledge about alcohol

2) encourage appropriate attitudes towards alcohol

3) moderate alcohol related behaviours

4) be enhanced if the teacher had undergone simulated in-service training

More specific details will be given in Chapter seven, where the null hypotheses set up for quantitative analyses will be explained.

An additional objective, not directly related to the evaluation, was to identify the patterns of use of alcohol, tobacco and illicit drugs within the cohort of 12 to 13 year olds.

The educational rationale underlying the package would incorporate evidence on effective approaches from other evaluation studies. In addition the package developed would aim to satisfy the five basic criteria above.

3.2.2 The Study Areas

The study was conducted in state schools in three regions of Britain. Because the primary focus of the study was to examine changes over time in the same population, a nationally representative sample was not essential, and would have necessitated a much larger and more costly exercise. The three regions were selected as a result of the feasibility study for two main reasons: a) they had expressed a strong desire to be actively involved in any subsequent research; b) to allow representation of one

local education authority from each of England, Scotland and Wales. The three regions finally selected were Berkshire in England, Highland in Scotland and Dyfed in Wales, as illustrated in Figure 3.1 overleaf.

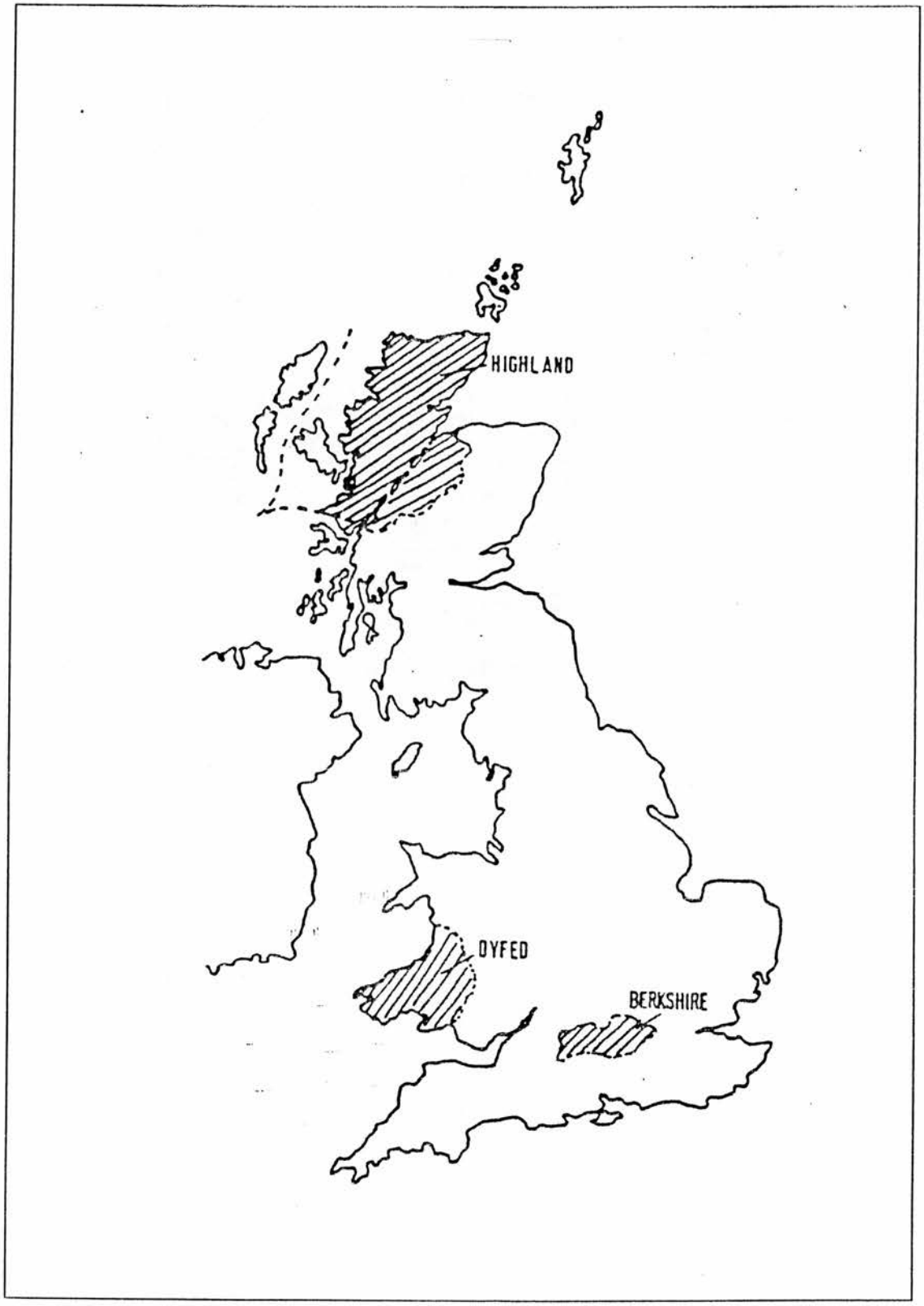


Figure 3.1 Map of Britain to show the position of three regions selected for study.

3.2.3 Method/Design

This section is intended to give a broad overview of the method used to evaluate the alcohol education programme. Specific details will be discussed at appropriate points in subsequent sections with emphasis on theoretical foundations and practical limitations.

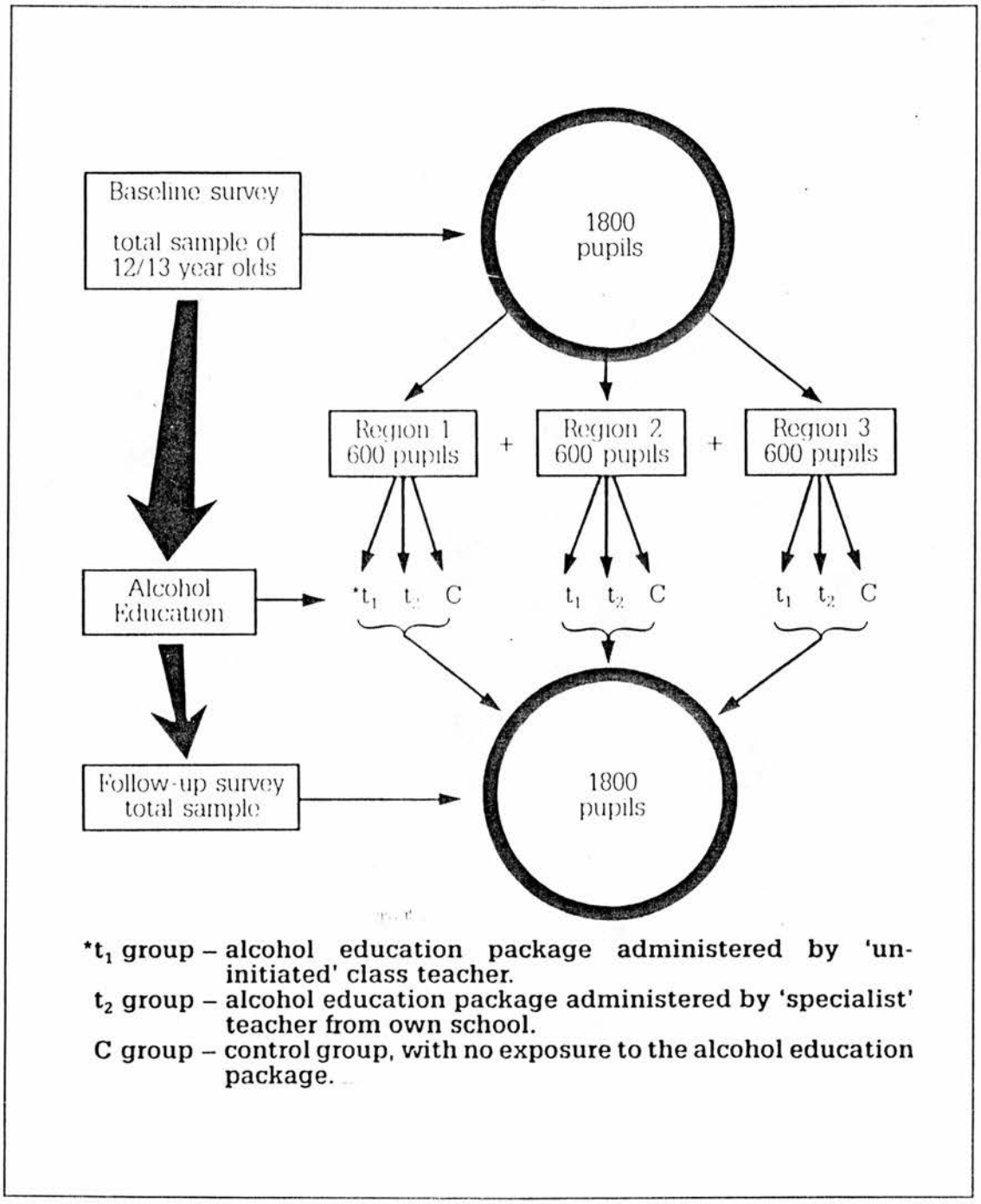
A prospective (follow-up) design was adopted using pre- and post-intervention measures as discussed in Chapter two. The overall research had three principal stages:

a) BASELINE SURVEY
A questionnaire was completed by all 12 to 13 year olds in the selected schools. This was designed to elicit data on alcohol related knowledge, attitudes and behaviour of the complete study group.

b) DEVELOPMENT AND ADMINISTRATION OF THE ALCOHOL EDUCATION PACKAGE
There were three schools in each region. The first schools had no involvement in the development of the educational materials and class teachers there were asked to teach the package after a 30 minute introduction. The second schools seconded two specialist teachers for a short period to assist with the development of the package. This represented the simulated in-service training component referred to in the objectives of the study. These teachers were then responsible for teaching the package to all their second year pupils. The third schools had no exposure to the alcohol education, and acted as a control.

c) FOLLOW-UP SURVEY
This entailed re-administration of the questionnaire to the complete study group in all the selected schools, approximately 15 months after completion of the educational intervention.

The main purpose of the study was to analyse the shift in knowledge, attitudes and behaviour between baseline and follow-up surveys. Comparison between control and intervention group schools would give an indication of the effectiveness of the alcohol education package. This research design is illustrated in Figure. 3.2



***t_1 group – alcohol education package administered by 'un-initiated' class teacher.**
t_2 group – alcohol education package administered by 'specialist' teacher from own school.
C group – control group, with no exposure to the alcohol education package.

Figure 3.2 Detailed Research Design.

It can be seen that the project had two main strands:

a) questionnaire surveys of alcohol related knowledge, attitudes and behaviour of the study group

b) development and administration of an alcohol education package.

3.2.4 Selection of Schools

The co-operation of directors of education in each regional authority was secured by personal visits, at which the details of school involvement were discussed. Subsequent negotiations were conducted with the senior adviser for health/personal and social education in each region. Three schools were required from each region, all of which would take part in the questionnaire surveys. Nine state comprehensive schools were selected to participate in this study. For the purposes of evaluation, one school in each region would act as a control, and would have no exposure to the alcohol education materials developed for the study, or indeed to any alcohol education. This was agreed with the head teachers of these schools. It was important that the control schools were geographically distant from the others in the study, to minimise the risk of "contamination". The major constraint in selection of the other two (intervention group) schools in each region was that the staff (or at least the head teacher) must have some commitment to providing alcohol education. In addition the 'specialist' intervention school (t2 group in Figure 3.2) had to be willing to co-opt one or two experienced health or social education teacher(s) to work with the author in developing the educational materials. In all other respects the schools selected with the assistance of directors of education and senior advisers were chosen to represent a mixed 'catchment area' population. Clearly however, the schools were not randomly selected and thus not necessarily representative of their region.

Head teachers of individual schools were approached initially by senior advisers in their regions and then contacted personally by the author to discuss detailed requirements. At this stage two schools had to be replaced - one because it was too small to give the necessary quota to allow a balanced comparison, and another because it was already actively involved in its own alcohol education programme. Selection bias within schools was avoided by including in the study all children aged 12 to 13 years in each school. In other words, no selection was made within year groups. In advance of the survey, copies of a standardised letter were sent to each school for circulation to the parents of all potential respondents. This letter outlined the research project, reassured parents of confidentiality and gave them the option to withdraw their children from participation if

so desired. A copy is included in Appendix 1. This 'contracting out' option follows a procedure elaborated in the Lothian region survey referred to above. 3.4 per cent of potential respondents withdrew in this way. Comments from school staff indicated that the pupils who did withdraw did not appear to differ conspicuously from the participants in terms of academic ability or home environment. The resulting study group contained 1586 pupils, approximately 500 per region. The male:female ratio for each region was similar, with approximately equal numbers of either sex being included in the study. The mean age for the total study group was 13 years 1 month. The distribution of age and sex by region is shown in Table 3.1 below.

Table 3.1 Regional distribution of age and sex.

Region	Total	Males	Females	Modal Age (years,months)
Highland	576	290 (50.3%)	286 (49.7%)	13,6
Berkshire	609	315 (51.7%)	294 (48.3%)	13,2
Dyfed	401	207 (51.5%)	194 (48.5%)	12,9
Total	1586	812 (51.3%)	774 (48.8%)	12,11

3.2.5 The Survey Instrument

Data collection was by self-completed questionnaire, administered in a group setting. The questionnaire was adapted from the one used by Plant et al. (1985) in their survey of 15 and 16 year olds in the Lothian region of Scotland. The principal changes required to adapt the earlier instrument for the present study involved simplifying the language for this younger age group and removing questions not relevant to 12 and 13 year olds. The revised questionnaire was pre-tested on four 13 year olds, and piloted on approximately 150 second year pupils in two large Edinburgh state comprehensive schools. This indicated one further important revision, when many of these pupils were unable to complete the section on attitudes which was presented in a five point rating scale format. Many pupils failed to understand how to complete this section, and had to ask for assistance. Discussions with pupils after they had completed the questionnaires suggested that even those who apparently understood what

was required found five gradations difficult to handle. Consequently, the format was revised to provide a set of 20 attitude statements, to which pupils responded either 'agree', 'disagree' or 'not sure'.

The questionnaire elicited information on biographical details, factual knowledge and experience of, and attitudes towards, alcohol and its consequences, together with data on the use of tobacco and illicit drugs. The questionnaire is reproduced in Appendix 2. A Welsh language version is also included; this was required for the control group school in Dyfed, which is a Welsh speaking school.

Validity and Reliability

Some reservations are often expressed about the reliability and validity of self-reported survey data. Under-reporting is a recognised problem, and is often attributed either to poor recall, or to a form of social acquiescence where the respondent wants to convey an image of drinking less than in reality. This could be particularly prevalent in surveys of young people where reluctance to admit to under-age drinking may predominate. On the other hand, some young people may be tempted to exaggerate their consumption levels. Either way, it is important to interpret self-reported consumption levels with caution (Marsh et al. 1986). Crawford (1987b) has noted that poor recall may contribute to both under- and over-reporting, depending on the nature of the survey question. He cites evidence of a tendency for adult respondents 'to under-estimate frequency of drinking, and to over-estimate the quantity consumed on a typical drinking occasion' (Crawford 1987b: 168). To assess more accurately the nature and extent of such bias, he recommends the use of better 'tools' such as lie scales or social desirability scales. In some surveys of tobacco consumption, it has been possible to verify self-reported data with a simple saliva testing technique which provides biochemical evidence of the presence of nicotine (see for example Gillies 1986). Unfortunately, such an objective validity check is not possible with self-reported data on alcohol consumption. In surveys of adult populations, it has been suggested that bias may be introduced, especially in a randomly selected sample, by under-representation of heavy drinkers (Yates et al. 1984; Pernanen 1974). Such potential respondents, it is argued, may be more difficult to locate or more likely to decline interview. In the context of the present study with

its survey of young people in a school setting, such problems should not be significant. As noted in Chapter one, the school provides an ideal setting with virtually a captive population for this kind of research. There is a possibility, however, that young people who are the heaviest drinkers may be more likely to be non-attenders at school, and therefore absent during the survey. This possibility was explored and did not appear to be the case in the present study, especially given the apparently low rates of absenteeism. The issues of validity and reliability will be addressed again in Chapter four, where the baseline survey is discussed in depth.

Research into the effects of interviewer characteristics on survey data has produced inconclusive findings. Some studies have shown that the sex of the interviewer can bias reported levels of alcohol and illicit drug use (e.g. Plant et al. 1985; Mulford and Miller 1959). Among school-age respondents, McKennel (1980) has noted significant interviewer effects when the data are elicited by face-to-face interviews in the home setting. In the present study the possibility of such interviewer bias was eliminated by using self-completed questionnaires. Furthermore, simultaneous collection of self-reported data enables a larger study group to be surveyed more easily and cheaply than would individual interviewing.

Questionnaire administration

The baseline survey was conducted in individual schools during November and December 1986. Questionnaires were administered in class or larger groups by the author and colleagues, with the assistance of locally recruited supply teachers. No class teacher was present during questionnaire administration, in order to reassure pupils of confidentiality. In this study anonymity was not possible because of the need to re-survey the same respondents 18 months later. Two schools, however, were unwilling to participate unless anonymity was guaranteed. Consequently a number was allocated by these schools to each of the pupils involved and this replaced the name on the questionnaire. A record linking these numbers with names was lodged securely with the local education authority and was accessed only by the school for cross-matching individuals in the follow-up survey. All respondents were provided with written and verbal assurances that their identities would be treated as strictly confidential. For the Welsh speaking school in Dyfed, the

questionnaires, which had been translated into the Welsh language, were administered by bilingual supply teachers under the supervision of the author. The responses in Welsh were then translated into English by a Welsh speaker in Edinburgh, prior to computer coding.

3.2.6 Development of the Education Package

Information from the feasibility study had indicated that teachers and senior educationalists were aware of the availability of some good alcohol education resources in the United Kingdom. However these packages are frequently viewed as too expensive for individual schools to purchase, or unrealistically demanding in terms of preparation time and/or in-service training. Nor had any of them been formally evaluated. For the purposes of the present study, it was decided to put together, selecting where appropriate from existing materials, a package which overcomes some of these difficulties and thus aims to satisfy the criteria identified in the feasibility study. As noted in Figure 3.2, one school in each region seconded one or two teacher(s) to assist with development of the alcohol education materials. Five teachers subsequently attended a two-day workshop organised in Edinburgh, with the objective of drawing up a framework for the package content. Although the academic backgrounds of these teachers were varied, they were all highly experienced in personal and social/health education or guidance. The author maintained contact with these five teachers by personal visits during the detailed development of the alcohol education materials. The resulting package was piloted on approximately 600 second year pupils with 17 teachers in three state comprehensive schools in Lothian region. Modifications recommended by the piloting were incorporated into the final version of the package used for evaluation. These will be discussed in detail in Chapter five. The timetable for the complete three year study is shown below.

Table 3.2 Timetable of 3 year study.

1. *March-July 1986*
   Initial contacts made with the three study areas. Survey questionnaire devised.

2. *August September 1986*
   Package prepared for piloting following 2-day workshop with co-opted teachers. Questionnaire piloted in Lothian region schools.

3. *October 1986 - March 1987*
Baseline survey conducted in three regions. Education package piloted in Lothian region schools.

4. *April-June 1987*
Package taught in study group schools.

5. *July 1987-March 1988*
Analysis of baseline data.

6. *April-May 1988*
Follow-up survey conducted in three regions.

7. *June 1988-March 1989*
Analysis and documentation of survey results.

CHAPTER 4

THE BASELINE SURVEY

4.1. QUESTIONNAIRE ADMINISTRATION

4.1.1. Procedure in Schools

The baseline survey was conducted in each of the nine participating schools during November and December 1986. As noted in Chapter three, classes or larger groups of pupils self-completed the questionnaire under the supervision of the author and assistants. Supply teachers were also recruited when necessary to assist with this administration, since on some occasions eight or nine classes were required to complete the questionnaire simultaneously in individual classrooms. It was important that supervision was by persons unknown to pupils, primarily as a reassurance of confidentiality. School staff were therefore excluded from survey administration other than in provision of a preliminary introduction and 'settling down' of pupils. They agreed however to be readily available should any problems, disciplinary or otherwise, arise.

Administration was standardised as far as is practically possible. Schools had organised the physical surroundings in advance to comply with their own needs and those of the research. Wherever possible, complete year groups were surveyed together in a school hall under examination conditions. Otherwise individual classrooms were used, with pupils seated at alternate desks to discourage copying or any form of communication which might jeopardise valid responses. Once pupils were seated, standard instructions were read out, reinforcing the confidentiality of the data collection and emphasising that neither parents, teachers nor other pupils would have any opportunity to read the completed questionnaires. It was also stressed that pupils should raise their hands for individual advice if they encountered any difficulties while working through the questionnaire. Firm discipline was essential to maintain order, especially within some of the larger groups of 200 or more pupils.

The questionnaire required an average time of 20 minutes for self-completion, although many pupils took considerably longer than this. A minimum time allocation of 40 minutes had been requested from each school. Two schools restricted the time to 40 minutes, with the remaining seven allowing at least one hour for survey administration. To avoid distracting pupils who were slow to complete the questionnaire, all respondents had to remain seated for the duration of the survey. A word game was attached to the end of the questionnaire to occupy the time of those respondents who were finished.

In the planning of the study, a decision had been made in the early phase, during consultation with educational advisers, that pupils with learning difficulties or any kind of special need should be included in the research. Hence no pupil in any of the selected year groups would be excluded from the study, unless of course the parental option to withdraw was exercised. Inclusion of this group of young people required a slight modification to the survey administration. In each school, these pupils were gathered into one small group, and the survey administrator read through the questionnaire with the group, allowing each person to mark off the appropriate response before moving on to the next question. In this way it was ensured that adolescents with learning difficulties, especially any related to reading, were able to understand the questions and were not at a disadvantage.

4.1.2 Validity of Responses

In Chapter three some of the general problems associated with validity and reliability of data from self-completed questionnaires were discussed. The potential for response error is wide-ranging, especially in surveys which include opinion or attitude questions. Moser and Kalton (1985:392) have pointed out that

> 'There is a substantial amount of general experience on the adequacy of different survey procedures, and there are numerous findings on errors introduced in specific situations. But each survey is in some respect novel, and what is lacking is a satisfactory methodology of measuring the size of response errors in the individual survey.'

These authors go on to argue that 'The study of gross errors (total response error) is never easy and often - as with opinion questions - virtually impossible'.

Sometimes it is possible to cross-check individual response data against known statistics or records to assess their validity - in other words to ascertain the extent to which the recorded values reflect the true values. In the present study, for example, the birth date recorded by respondents on the questionnaire could have been checked against official school records. However the extra administration that this would have entailed, both for the school and the researcher, was seen to outweigh any advantage. In particular the value of identifying any individual discrepancy in this context is open to question. Differences could arise from an error on the school record or in the cross-checking, as well as from response error. Based on only one factual response, such information would have little implication for other responses, especially those to more sensitive questions about illicit drug use and under-age alcohol consumption.

4.1.3 Reliability of Responses

Test-retest reliability of questionnaire responses is commonly assessed by repeating the survey on all or on a proportion of the study group a short time after the original survey. A major weakness inherent in this method is that while responses may be consistent over the two surveys, this could merely reflect consistency in response bias or error. (Oppenheim 1976; Moser and Kalton 1985). In the earlier survey of Lothian teenagers (Plant et al. 1985) test-retest reliability was checked on 870 of the 1036 original respondents with four months between the two surveys. There was some indication that logical inconsistencies in response to individual questions were weakly associated with self-reported levels of alcohol consumption. Overall however the authors concluded that the results were very similar in both surveys. In the present study such reliability checking was in any case precluded on the grounds of practical constraints. Firstly, adequate standardisation of survey administration could not be guaranteed without the presence of the author. The study design already required this on two separate occasions, for the pre- and post-intervention surveys. Given the widespread geographical location of

the participant schools, a third administration of the survey would have proved time consuming and costly. It is also questionable whether staff and pupils could have been further imposed upon to participate in a repeat survey. Their goodwill could have been lost if additional disruption to school routine had been requested. A further reason for omitting this kind of reliability assessment concerned the time scales for the entire study. Development and piloting of the alcohol education package progressed in parallel with the baseline survey. Some schools in the research would therefore introduce the alcohol education package to their pupils almost immediately after the pre-intervention survey. Clearly a repeat survey to provide data for reliability estimation would have been of no value if the educational intervention was already underway.

Oppenheim (1976) has noted that a popular approach to the problems of reliability is to compare findings with other relevant studies. This is the approach adhered to in the present study. In the final section of this chapter, the findings from the baseline survey will be compared to other studies.

It should be noted that some of the variables in the questionnaire, especially those related to demographic characteristics, should remain static at pre- and post-intervention. These also can be taken as an indicator of reliability. For the cohort of respondents who completed both surveys, the distributions of sex and country of birth were virtually identical on both occasions. This was true also for responses to the question 'with whom do you live?', with only small changes evident in the period between the two surveys.

4.1.4 Coding and Data Preparation

The coding frame was largely pre-determined by the use of closed questions. For the open-ended questions, a coding scheme was devised to take account of the frequency and range of categories arising spontaneously. Two coders were employed for several weeks to check the self-completed responses and to code the open-ended questions. The questions on quantity of alcohol consumed were coded into standard units of alcohol. (One standard unit is equivalent to half a pint of ordinary beer, lager, stout or cider, or to a single measure of spirits or glass of wine.

Each unit contains approximately 10 ml (7.9g) of absolute alcohol). For the open ended question on consumption, this entailed consultations with a local cocktail bar manager to ascertain the exact content of unusual cocktails. The highest category of consumption for coding purposes was more than eight units. Responses which were apparently exaggerated were included in this category. The open-ended question on parental occupation was coded into a dichotomous variable indicating manual or non-manual employment. A third category identified unemployed status, although wherever possible the nature of last employment was established. It had originally been intended to classify socio-economic status on the basis of parental occupation (using mother's if a single parent family). However the responses filled in by the 12 and 13 year olds were vague and often ambiguous, and insufficiently accurate to permit such classification.

In the special case of the questionnaires presented and completed in the Welsh language, the above coding was carried out by a native Welsh speaker resident in Edinburgh.

A card index was compiled for each education authority, with each card providing a record of respondent name, school, home address, date of birth and identification number. This was essential for respondent identification in the post-intervention survey. For the two schools who had issued their own identification numbers to pupils in place of name and address, the index cards recorded school name, school identification number, date of birth and research identification number.

The checked and coded data were transferred directly from the questionnaires to magnetic tape using Edinburgh University's key-to-disc data preparation service. This method clearly requires careful checking of responses on individual questionnaires, and coding of open-ended responses, prior to data preparation. It does, however, eliminate the additional source of potential error inherent in the use of intermediate coding forms. The variables were defined in an SCSS master file (Nie et al. 1980) and analysis proceeded using this statistical package on EMAS, Edinburgh University's mainframe multi-access system.

4.2 RESULTS AND DISCUSSION

An important point to note here is that the study group used in this research was not selected by a technique which would produce a statistically representative sample of the total population of 12 to 13 year olds in Britain, thus limiting the extent to which the results can be generalised. A nationally representative sample was not required for this study, since the evaluation was based on changes within the same group of young people. The principal function of the baseline survey was to provide the pre-intervention data for analyses related to evaluation, and cross sectional analysis of this initial survey may be regarded as a minor part of the overall study.

This section will describe the study group and their use of alcohol from the baseline data. Comparisons will be made with other similar surveys, and it will be seen that this study group were not remarkably different from their counterparts in nationally representative studies.

4.2.1 The Total Study Group

Experience of Alcohol

Ninety-six per cent of all 12 to 13 year olds in the baseline survey reported having tasted an alcoholic drink. Four per cent were thus abstainers. For the total sample the modal age for first taste was 11 to 12 years. Parents or adults other than parents were reported as the providers of the first taste of alcohol for 81 per cent of the study group. For 84 per cent the first taste occurred in the family home.

The principal measure of alcohol consumption in this survey referred to the last occasion on which respondents had consumed alcohol. This is in contrast with many other surveys, particularly those of older respondents, which generally use a 'seven-day diary'. As the name suggests, this is intended to help the respondent to provide a detailed account of the amount of alcohol consumed on each of the seven days prior to the survey. However in their survey of teenagers, Plant et al. (1985) had indicated that only a minority of 15 to 16 year olds reported drinking alcohol every week. Moreover, when the survey questionnaire for

the present study was piloted with a seven-day diary included, it became clear that very few of the 12 to 13 year old respondents had consumed any alcohol in the preceding seven days. A measure of alcohol consumption based on this technique therefore appeared of little value, since most youngsters would not be able to provide any information. Respondents were therefore asked when they had last consumed alcohol, how much they had consumed, and whom they were with on this occasion. Fifteen per cent reported that they had drunk alcohol in the last seven days, while 37 per cent reported not having done so for more than twelve weeks.

Seventy three per cent of respondents reported that they had been with their parents on this last occasion, and 20 per cent said they had been with friends of the same age.

Figure 4.1 below illustrates the amounts of alcohol which respondents reported they had consumed on the last occasion. These quantities are sub-divided into three categories of alcohol type - beers (this includes ciders), wines (this includes fortified wine such as sherry) and spirits.

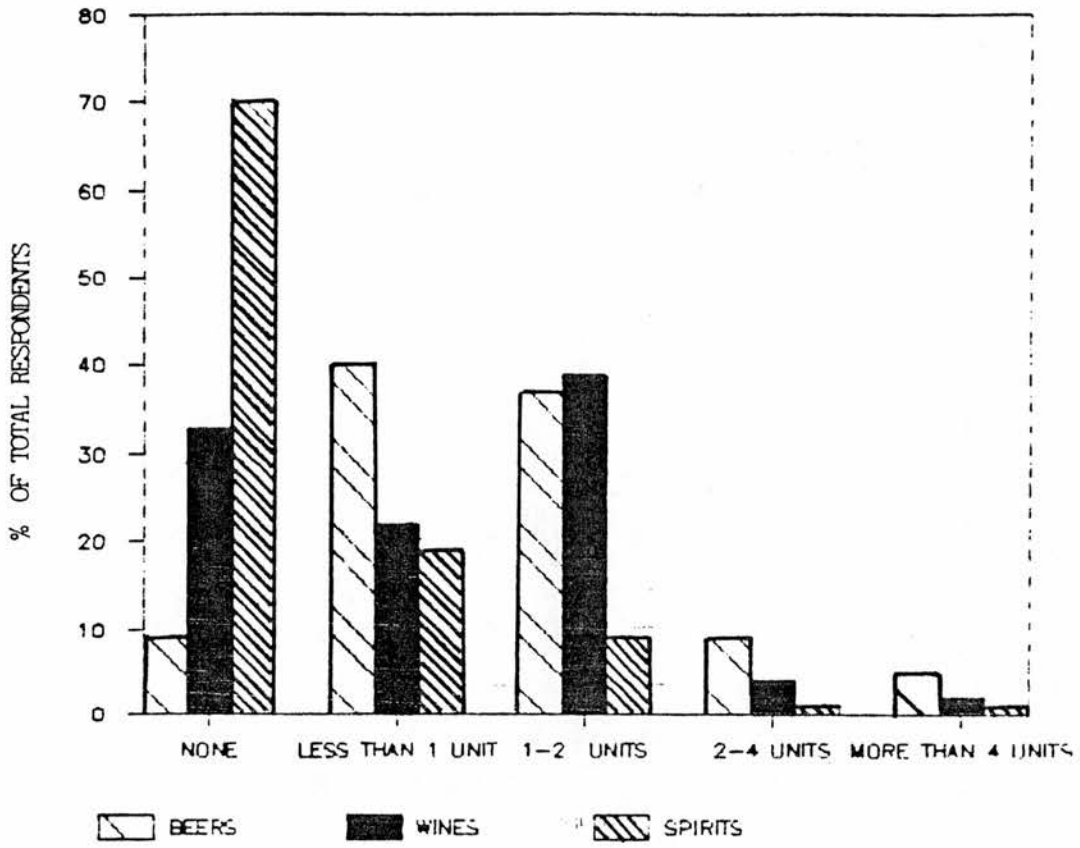


Figure 4.1 Quantity Consumed on Last Occasion

Two points emerge from Figure 4.1. Firstly, few of the young people in this study had consumed more than four units of alcohol on the last occasion. This is approximately two pints of beer or equivalent. Secondly, experience of spirits consumption appeared very limited, with beers (this includes ciders) being the most popular beverage.

Figure 4.2 shows the most alcohol that respondents reported that they had ever consumed during one session of drinking. (This was an open-ended question with the quantity subsequently coded into standard units of alcohol).

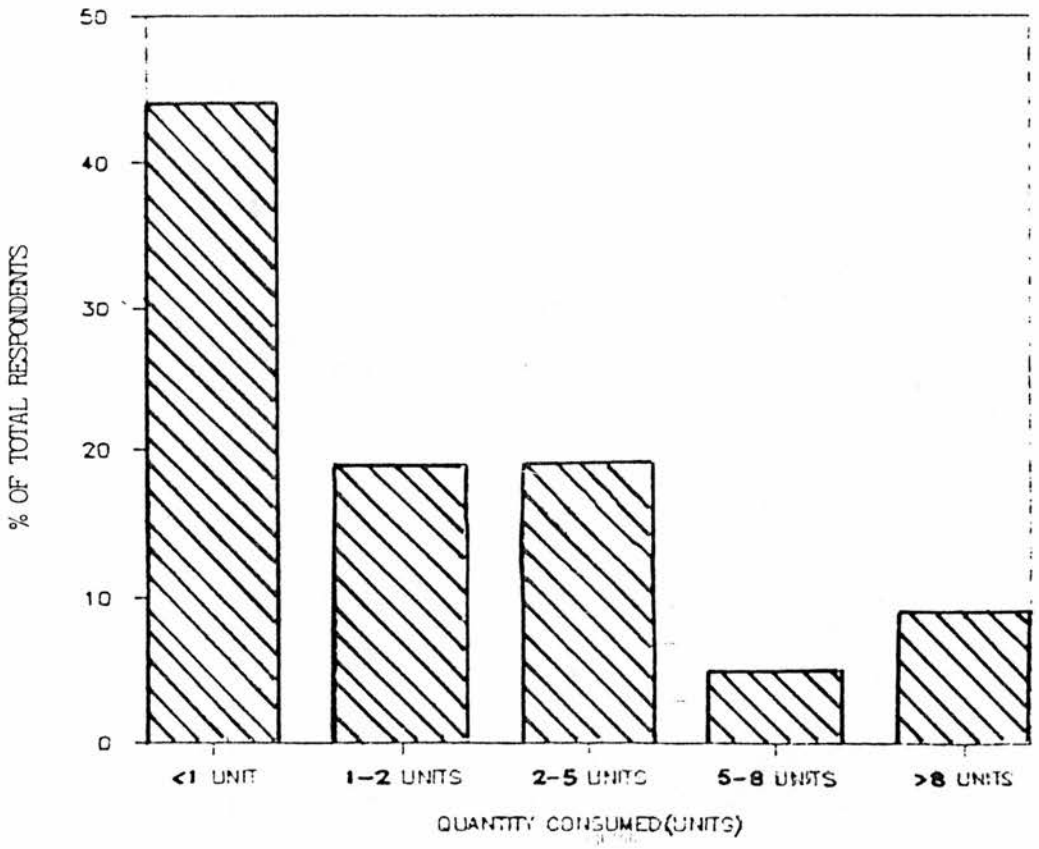


Figure 4.2 Maximum Consumption During One Session

This indicates that for 45% of respondents the maximum amount of alcohol ever consumed was less than one unit of alcohol. At the other end of the scale, however, nine per cent of respondents reported that they had consumed four pints of beer or more in one session.

Knowledge about alcohol

Information on respondents' factual knowledge about alcohol and its effects was obtained using a 'quiz' of fifteen statements about alcohol such as, for example, 'Alcohol is a drug'. Pupils had to indicate whether they thought each statement was TRUE or FALSE, or whether they did not know the correct answer. The individual items are reproduced in Table 4.1.

Table 4.1 Responses to Knowledge Items

	Knowledge Item	% corr -ect	% wrong	% don't know
(a)	Alcohol makes you more alert.	76	11	13
(b)	A single whisky (as measured in a pub) is stronger than a pint of beer.	9	60	31
(c)	Alcohol is a drug.	69	15	16
(d)	The same amount of alcohol affects males and females in the same way.	39	34	27
(e)	Eating along with drinking will slow down the effects of alcohol.	34	25	41
(f)	Adding soft drinks such as lemonade or fruit juice to alcoholic drinks helps the alcohol to leave the body more quickly.	21	35	44
(g)	It is possible to drink small amounts of alcohol without harming health.	54	24	22
(h)	Giving alcohol to accident victims can be dangerous.	58	13	29
(i)	All lagers and ciders contain roughly the same amount of alcohol.	32	28	40
(j)	Drinking only one pint of beer can affect driving skills and the chance of having an accident.	52	32	16
(k)	It can be dangerous to drink alcohol if you have taken tablets or medicines.	82	3	15
(l)	The human body gets rid of two pints of beer in one hour.	32	6	61
(m)	Alcohol harms less people in Britain than illegal drugs such as heroin and cocaine.	35	28	37
(n)	A glass of table wine contains much more alcohol than half a pint of cider.	36	17	46
(o)	Drinking spirits is more likely to lead to problems with alcohol than drinking cider.	6	61	33

In this baseline survey, the modal 'score' (i.e. total number of items correct on the knowledge quiz) was six out of a possible fifteen. The young respondents demonstrated considerable uncertainty about these alcohol related 'facts'. The modal 'score' for items incorrect was four out of fifteen. As these quiz 'scores' suggest many respondents chose to tick the 'don't know' option on the knowledge quiz. Analysis of individual items revealed some useful details about the existing knowledge base for this

group of young people, indicating considerable scope for improvement of alcohol related knowledge.

Cross tabulations revealed no significant associations between average score on knowledge quiz and school, sex or occupational status of parent(s).

Ill-effects of alcohol

Three hundred respondents (20 per cent of the study group) reported having had a hangover. For most this had been experienced only once, with 14 respondents (one per cent of the study group) reporting more than four hangovers in the last six months.

Approximately five per cent (n=50) reported some adverse consequence arising from their consumption of alcohol, such as trouble with parents or problems at school. Twenty-seven per cent reported having had an upset stomach because of drinking and four per cent (n=70) had experienced some kind of alcohol related accident or injury. Drinking alcohol had been a source of worry for nine per cent of respondents and 13 per cent reported having felt guilty or ashamed about their drinking.

Attitudes towards alcohol

Much research has been devoted to what constitutes an attitude and how this can be measured (Warren and Jahoda 1976; Oppenheim 1976). For the purposes of this study an attitude is conceptualised as an individual's disposition in relation to appropriate situations and assumes beliefs (cognitive) values and personality components. Cook and Seltitz (1976) have categorised different approaches to measuring attitudes and the method used here can best be described in their category which relies on drawing influences from self-reports of beliefs and feelings towards an appropriate class of objects.

A list of twenty short statements about alcohol was devised. Half of these statements were intended to reflect approval of alcohol consumption; e.g. 'Alcohol makes people more fun to be with'. The other ten statements were intended to reflect disapproval; e.g. 'Young people who drink alcohol are more likely to get into trouble at school'. Full

details of these questions can be found in Appendix 2. Respondents were asked to tick a box to indicate whether they agreed with each statement, whether they disagreed or whether they were uncertain either way. Agreement with a statement reflecting approval of alcohol consumption was taken to indicate a positive attitude. Disagreement with this statement would be interpreted as a negative attitude. In the same way, agreement with a statement suggesting disapproval of alcohol was interpreted as a negative attitude to alcohol. Disagreement with such a statement was seen to indicate a positive attitude. Using this interpretive framework, it was possible to add up a positive attitude score and a negative attitude score for each respondent.

The mean totals for positive and negative attitudes respectively in this baseline survey were 3.7 for attitudes favouring alcohol, and 12.4 for attitudes disapproving of it. The maximum possible score for each was 20. It would thus appear that at the time of the baseline survey, before the alcohol educational intervention, the respondents as a group were more likely to hold attitudes of disapproval towards alcohol. As with the items about alcohol related knowledge, many of the young respondents ticked the option indicating uncertainty.

Perceived parental attitudes to youthful alcohol consumption were also investigated. Forty-three per cent of respondents reported that their father/step-father would object to their drinking alcohol. Fifty per cent thought their mother/step-mother would object. On the other hand, 40 per cent had been offered alcohol to drink by their father/step-father and 30 per cent by their mother/step-mother.

Alcohol Education

As noted in the Introduction, alcohol education is generally given very low priority in the school curriculum, with no compulsory inclusion in the education system either in England and Wales or in Scotland. This was reinforced by the finding from the baseline survey, where it became clear that provision of school-based alcohol education as indicated by the respondents was minimal in all of the nine schools included in the study. Reported sources of alcohol education are tabulated below.

Table 4.2 Sources of Information about Alcohol Recalled by Respondents

In School		Outside School	
Film	11%	Doctor/Nurse	5%
Leaflet	20%	Someone from church	6%
Guest Speaker	6%	Parents	66%
Special Lesson	20%	Grandparents	22%
Booklet	12%	Friend	21%
		TV/Radio	52%
		Magazine/Newspaper	32%

Of particular interest to this evaluation study, no significant association was found between current knowledge about alcohol, as assessed by the 'quiz' items, and any previous alcohol education. This suggests that any alcohol education which had taken place produced little impact on respondents' knowledge about alcohol.

Tobacco and illicit drugs

The questionnaire survey also asked the respondents about their use of tobacco and of illicit drugs. Thirty-four per cent claimed that they had never smoked tobacco and six per cent reported that they currently smoke cigarettes (i.e. at the time of the baseline survey). Only five per cent (n=78) of these 12 to 13 year olds reported having used any illicit drugs such as cannabis, glues or solvents. These data are shown in Table 4.3 below. (The total n exceeds 78, since the categories were not mutually exclusive).

Table 4.3. Illicit Drug Use for Total Sample (n=1586)

Drug	Self-reported use	
	n	%
Cannabis	14	0.9
L.S.D.	3	0.2
Barbiturates	3	0.2
Glues or solvents	30	1.9
Amphetamines	6	0.4
Opium	2	0.1
Morphine	2	0.1
Heroin	4	0.2
Cocaine	1	0.1
Sleeping tablets/ tranquillizers	38	2.4

Sleeping tablets/tranquillizers were clearly the most commonly used illicit drugs. In view of this, it is important to note that the questionnaire specifically referred to recreational use of drugs. The misuse of sleeping tablets/tranquillizers described above may well have arisen through access to drugs prescribed for someone else, perhaps a parent or relative in the same household as the respondent.

The above findings give some insight into what the study group know about alcohol, how they use and misuse it, and what they feel about it. In general, they suggest that although nearly all of the 12 to 13 year olds had some experience of alcohol, it was mostly quite limited, and took place in the family home under parental supervision. However, a small minority were already misusing alcohol, putting themselves and possibly others at risk of accident and injury. These numbers cannot be ignored, and alone justify some kind of response. Furthermore, the young people in the study demonstrated a very limited knowledge about alcohol and its effects. These are some of the important issues which must clearly form the basis of alcohol education for this age group.

The next section will examine the extent to which the findings of the baseline survey match those from similar studies.

4.2.2 Comparison with Other Studies

Proportion of 13-year-olds who have never tasted alcohol.

As Ahlström (1987) has noted for young people in Finland, the transition from abstinence to drinking is a gradual process. It is therefore of great importance to specify the age group referred to in any discussion of juvenile alcohol use. This makes direct comparisons with the present survey difficult as not many studies of young people and alcohol include respondents as young as 13 years.

In their study of 15 to 16 year olds in the Lothian Region of Scotland, Plant et al. (1985) found that 2 per cent were abstainers. Despite the age difference of their study group, a similar figure emerged in the present study of 12 to 13 year olds, with 4 per cent never having tasted alcohol. This differs from the findings of Marsh et al. (1986) in their national survey of British 13 to 17 year olds. They found that 6 per cent of 13 year olds in England and Wales reported that they had never tasted alcohol, but in Scotland the corresponding figure was higher with 12 per cent being abstainers. One explanation for this difference between the two studies lies in the nature of the two samples. The study group in this education project, as already noted, was not selected as being representative of the general population. The national survey of Marsh et al. was however selected on this basis, in order to enable generalisation of their results to the population of 13 to 17 year olds in Britain as a whole. Different sample characteristics can bias data. However, as will shortly become apparent, many of the findings in the present study resemble those from other relevant studies. This would suggest that the study group which participated in the alcohol education project did not differ radically from the general population of 12 to 13 year olds in Britain. A simpler but perhaps more tangible explanation lies in the way questions are worded in different surveys. For instance in the present study, the question under discussion asked: ' Have you ever tasted an alcoholic drink, even just a sip?'. The national survey omitted 'even just a sip'. With this qualification missing it seems quite plausible that fewer respondents would be able to answer 'YES'. In other words a higher percentage of young people will have tasted a sip of alcohol, but without having had what they regard as an alcoholic drink. It is difficult to overcome ambiguities of this kind in

surveys, especially when the respondents have to read the questions and fill in the answers by themselves. The problem of interpreting such questions has been discussed by Gordon and McAlister (1982). In particular, these authors identify the difficulties which arise when comparing surveys which do not share a uniform definition of what constitutes an alcoholic drink. A further illustration of these problems is quoted in their reference to a national study of adolescent drinking in the United States, in which 38 per cent of American 13 year olds reported that they were abstainers (Johnson et al. 1977). Clearly this is a much higher proportion than either of the above British studies of 13 year olds, but may simply reinforce the potential ambiguity of questions such as 'Have you ever had a proper alcoholic drink?'.

Age of First Taste

Several studies, especially those which cover a wide age range, have identified the effect of differential memory bias, older respondents tending to recall an older age for this first experience. This phenomenon is by no means unique to surveys of alcohol use. The tendency has however been clearly illustrated in this particular context by Ahlström (1987) who found that 23 to 24 year olds in a Finnish study reported that they had begun drinking alcohol at the age of 15 years. Eight years earlier the same respondents, at age 15 to 16, had reported an average age of 12 years. This highlights the importance of comparing findings only within the same age group. However even when this constraint is imposed, differences are still apparent between the 13 year olds in the 1986 British national survey and the 12 to 13 year olds in the alcohol education study. In both studies, the most commonly quoted age for the first taste of alcohol was between 11 and 12 years. However, when we look at the proportion who reported having their first taste under nine years of age, some differences emerge. In the national survey, 11 per cent of the total sample came into this category. In the alcohol education study, 20 per cent reported having their first taste under nine years. Once again, however, these differences may well have arisen because of the different wording in the respective questionnaires, with the national survey specifically referring to the first taste of 'a proper alcoholic drink'.

In summary, it would appear that 13 year olds in Britain are more likely than their American counterparts to have tasted alcohol. Furthermore, the 13 year olds in the alcohol education study were more likely than those in the national survey of British adolescents to have tasted alcohol, and to have first done so at an earlier age. However, for reasons discussed above, these differences must be interpreted with caution.

Context of First Taste

In both the alcohol education study and the 1986 national survey of British adolescents, the majority of 12 and 13 year olds said that they had had their first taste of alcohol in the family home, and in the presence of parents. Comparison with data from other countries indicates that this is a common, but by no means universal pattern. Recent surveys in the United States also suggest that the first drink usually occurs in the family context (Gordon and McAlister 1982). In contrast, O'Connor (1985) found that Irish youngsters are most likely to have their first drink in the company of friends, and generally without the knowledge of parents. In Iceland, too, young people tend to have their first taste of alcohol in the company of friends, outside the family home. This introduction to alcohol usually occurs long before they are offered a drink by their parents (Olafsdottir 1985). Hibbel (1985) indicated that young Swedes usually have their first drink of wine in the company of parents, but have their first drink of spirits in the company of friends. Such variations serve to highlight the importance of the cultural role of alcohol and illustrate the extent to which young people conform to the social norms and expectations of their own society. More generally this reinforces the importance of social influences on the drinking behaviour of young people.

Frequency of Consumption

Few large-scale surveys of adolescent drinking have elicited data for 12 and 13 year olds on how often they drink alcohol. Once again this limited comparisons with the present alcohol education study. The response in this survey to the question 'when did you last have any alcohol to drink?' indicated that 15 % had drunk alcohol in the last week. The same question was asked in the National Survey, with slightly different results, indicating that 21% of 13 year olds throughout Britain had

drunk alcohol in the previous seven days. Respondents in this latter survey were also asked independently to fill in a diary requesting details about their alcohol consumption during the preceding seven days. It is interesting to note that the findings of the national questionnaire differed considerably from the corresponding responses in the seven-day diary. The questionnaire results suggested that the respondents drank less often than indicated by the details in the diary. Discrepancies of this kind serve to reinforce the need for cautious comparison of findings, particularly if the information is elicited in different ways.

4.2.3 Regional Differences - the Present Study

Contingency tables were used to examine the statistical significance of differences in the distribution in each of the regions on a range of variables. When a contingency table for three regions revealed statistical significance, the analysis was sub-divided to compare each region systematically with the others.

a) Parental Attitudes

Perceived parental attitude to youthful alcohol consumption was investigated by four questions. The distribution of responses by region is shown alongside each question in Table 4.4 below.

Table 4.4 Perceived Parental Attitude By Region.

Question	Percentage answering 'YES'		
	Highland	Berkshire	Dyfed
Would your father/step-father mind if you drank alcohol?	52%	33%	44%
Would your mother/step-mother mind if you drank alcohol?	61%	39%	49%
Has your father/step-father ever offered you a drink?	32%	44%	44%
Has your mother/step-mother ever offered you a drink?	23%	37%	31%

Overall, it can be seen that more fathers than mothers had ever offered the respondent an alcoholic drink. In addition mothers were

perceived as more likely than fathers to object if their 13 year olds were to drink alcohol. Within this pattern, crosstabulations on the raw figures revealed some statistically significant differences between the three regions. For question 1, 'Would your father/step-father mind if you drank alcohol?', Highland youngsters were more likely than their Berkshire counterparts [X^2 = 57.070; d.f. = 1; $p<0.001$] or their Dyfed counterparts [X^2 = 19.35; d.f. = 1; $p<0.001$] to report that their father would object to them drinking alcohol at the age of 13.

Similar differences emerged for question 2, 'Would your mother/step-mother mind if you drank alcohol?'. More Highland youngsters believed that their mothers would object, in comparison to the Berkshire youngsters [X^2 = 69.82; d.f. = 1; $p<0.0005$] and the Dyfed respondents (X^2 = 23.15; d.f. = 1; $p<0.001$]. The trend continues in question 3, 'Has your father/step-father ever offered you a drink?', with Highland region differing significantly from Berkshire [X^2 = 16.71; d.f. = 1; $p<0.001$] and Dyfed [X^2 = 13.28; d.f. = 1; $p<0.001$]. Highland youngsters in this study were therefore significantly less likely than the others to have been offered alcohol to drink by their fathers.

The responses to question 4, 'Has your mother/step-mother ever offered you a drink?', indicate that although the Dyfed youngsters were less likely to be offered alcohol by their mother than Berkshire children, such a difference was only significant between Highland and Berkshire respondents [X^2 = 26.32; d.f. = 1; $p<0.001$].

b) Location of Drinking

Although similar numbers of respondents in each region reported that they had consumed alcohol in their own homes, differences emerged for other locations. These are shown in Figure 4.3 where the data for each location were prompted by separate questions.

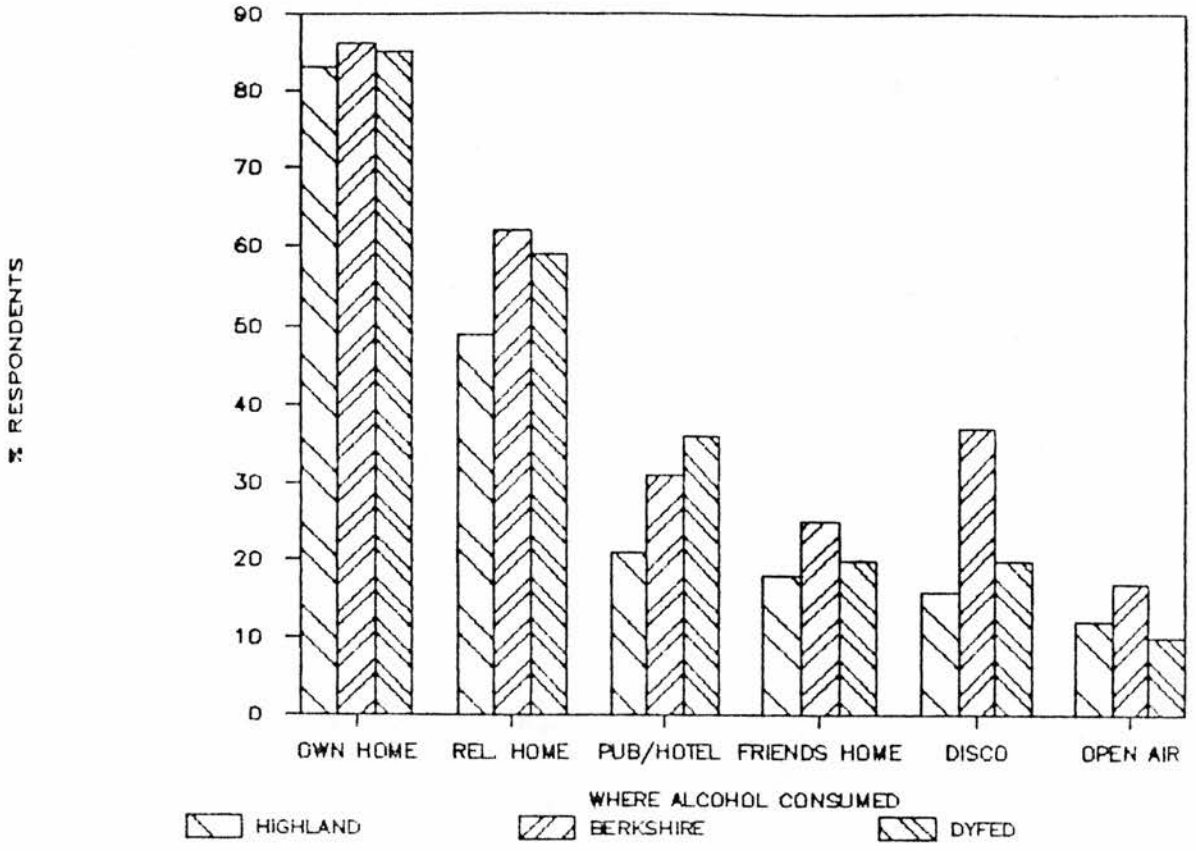


Figure 4.3 Location Of Alcohol Consumption By Region.

For the location 'home of adult relatives or parents' friends', the differences between Berkshire and Highland is significant, with more Berkshire 13 year olds having consumed alcohol in the home of adult relatives or friends of parents [X^2 = 16.90; d.f. = 1; $p<0.001$].

Analysis of the location 'pub or hotel', revealed that fewer 13 year olds in Highland region report having consumed alcohol in a pub or hotel than their English [X^2 = 11.82; d.f. = 1; $p<0.001$] or Welsh [X^2 = 23.46; d.f. = 1; $p<0.001$] counterparts.

A significantly higher proportion of Berkshire youngsters had consumed alcohol at a disco. Comparison between Berkshire and Highland gave X^2 = 62.98; d.f. = 1; $p<0.001$, and between Berkshire and Dyfed X^2 = 33.36; d.f. = 1; $p<0.001$.

Respondents were asked if they liked the taste of alcohol. The percentages reporting YES in each region were: Highland - 55%; Berkshire

- 71%; Dyfed - 63%. The difference between Highland and Berkshire is significant [X^2 = 27.20; d.f. = 1; $p<0.001$].

c) Attitudes

The remaining notable regional differences occurred in some of the attitudes about alcohol revealed by the youngsters in this study. It will be recalled that twenty short statements had been devised to reflect a mixture of positive and negative 'attitudes', and respondents had to tick whether or not they agreed with each attitude statement. In terms of total attitude scores, there was no clear regional trend towards positive or negative attitudes. The three individual attitude statements where significant differences did arise were as follows:

1. "A little alcohol makes a party go better".

Highland respondents (34%) were less likely to agree with this statement than youngsters in either Dyfed (48%) [X^2 = 22.83; d.f. = 1; $p<0.001$] or Berkshire (44%) [X^2 = 13.42; d.f. = 1; $p<0.001$]. On this question then, Highlanders indicated a more negative orientation.

2. "People who never drink alcohol are a bit odd".

Ten per cent of respondents in Highland agreed with this statement, 7% in Dyfed and 14% in Berkshire. The difference between the latter two regions was significant. [X^2 = 14.81; d.f. = 1; $p<0.001$].

3. "People who drink alcohol are usually scruffy and untidy".

The Dyfed youngsters (30%) were significantly more likely to agree with this statement than either Highland (21%) [X^2 = 14.81; d.f. = 1; $p<0.001$] or Berkshire (22%) [X^2 = 12.60; d.f. = 1; $p<0.001$] .

d) Tobacco and Illicit Drug Use

The numbers admitting to illicit drug use were so small that regional differences were not identifiable. With tobacco, however, a clear difference in the reported pattern of use emerged between Highland and Berkshire [X^2 = 13.03; d.f. = 1; $p<0.001$] and Highland and Dyfed [X^2 = 30.84; d.f. = 1; $p<0.001$]. Although 94% of the respondents across all three

regions report that they do not smoke now, many more Highland respondents admitted to having smoked tobacco at any time, 44% compared to 34% in Berkshire and 26% in Dyfed.

4.2.4 Regional Differences - Comparison with Other Studies

Despite the non-representativeness of the present study group, it is interesting to compare the regional trends with those emerging from more representative samples. As noted earlier, such comparison can serve as a crude form of validity check and emphasises the need for cautious interpretation.

The regional differences emerging in this study are not large but these may increase as the respondents get older. This would be predicted by the findings reported in Marsh et al. (1986) where several significant differences were identified between older Scottish and English and Welsh adolescents, particularly in the 15-16 age range.

Proportion of 13 year olds who have never tasted alcohol

In the present study the proportion of abstainers, four per cent, was consistent over all three regions. This differs from Marsh et al. (1986) where six per cent of 13 year olds in England and Wales and 12 per cent in Scotland said they had never tasted alcohol. As discussed in section 4.2.2. one possible explanation of this variation is the use of different wording.

Age of first taste

No notable regional differences were apparent in the findings of the baseline survey for this variable. In the National Survey there was some indication that Scottish adolescents were likely to recall having been introduced to alcohol at a slightly older age than their English or Welsh counterparts. Marsh et al. however do not attribute great importance to this, emphasising instead the problems inherent in this kind of data.

Frequency of Consumption

In response to the question 'when did you last have any alcohol to drink?' 15 per cent of the study group in the baseline survey had drunk alcohol in the last week, with similar distribution across regions. The same question was asked by Marsh and colleagues, with slightly different results. For English and Welsh 13 year olds, 26% had drunk alcohol in the previous week; the corresponding figure for Scottish 13 year olds was 17%. The problems inherent in eliciting such data were discussed in Section 4.2.2. Furthermore, the discrepancy noted above between the two surveys may reflect a sampling bias in the present study group.

Parental Attitudes

The analysis of perceived parental attitudes suggests that the Highland parents were generally less encouraging about alcohol consumption by their adolescent youngsters [Table 4.4]. It is perhaps unexpected that this regional variation was not reflected in significantly different consumption patterns such as age and donor of first taste. It is possible that these results may have been different if the questions had referred to a 'proper drink' rather than 'even just a sip'.

In their study of Glasgow adolescents, Davies and Stacey (1972) suggested that youngsters of parents who were restrictive and rigid in their attitudes about alcohol were more likely to drink outside the home. This would lead to the prediction of a higher incidence of such consumption behaviour amongst Highland 12-13 year olds in the present study. However as Figure 4.3 shows, the Highland youngsters here were significantly less likely to drink outside the home in locations such as a pub or hotel, or a disco. And unlike respondents in the survey by Marsh and colleagues, the Scottish 13 year olds here were also less likely to have had alcohol in a street or park, although this difference was not statistically significant. The simplest explanation for these findings, apart from the obvious limitations arising from non-representative sampling, is lack of access to parties and discos due to rural isolation. This was indeed confirmed by staff in one of the Highland schools, who suspected their second year pupils had never been to any discos, and certainly none where alcohol was available. It is also unlikely, in small communities where anonymity is difficult, that 12 or 13 year olds will find it easy to purchase

alcohol for consumption in a park, or elsewhere. It is quite possible that these regional differences will alter as the youngsters grow older and become less dependent on adults for their access to alcohol. However it should not be forgotten that for this age group, home is by far the most common location for consuming alcohol.

The above arguments could also go some way to explaining the apparently less positive attitude to alcohol indicated by Highland respondents on two of the attitude items simply as a lack of experience. However, a similar regional trend was identified is an earlier study of adults (Crawford and Plant 1986) in which Highlanders were more disapproving in their attitudes to alcohol than respondents in Tayside or Kent. In the present study, it is also important to remember that the total attitude scores did not differ significantly among the three regions.

4.2.5 Gender Differences - The Present Study

Many surveys in the United Kingdom and in other countries have shown large differences between adolescent males and females in their use of alcohol.

In this study, therefore, analyses were carried out to examine differences between males and females in the study group. Some of the differences which did emerge are discussed below. These were all statistically significant unless otherwise indicated.

Experience of alcohol

a. Quantity.

Several questions in the survey asked respondents about the amount of alcohol consumed. These self-reported quantities were sub-divided into categories representing units of alcohol. Within each of these categories, the proportion of males to females was compared. In some of these questions, the males reported significantly higher levels of consumption than did the females. This trend is illustrated for amount of beer drunk on last occasion in Figure 4.4(a), amount of wine drunk in Figure 4.4(b) and most alcohol ever consumed on one single occasion in Figure 4.4(c).

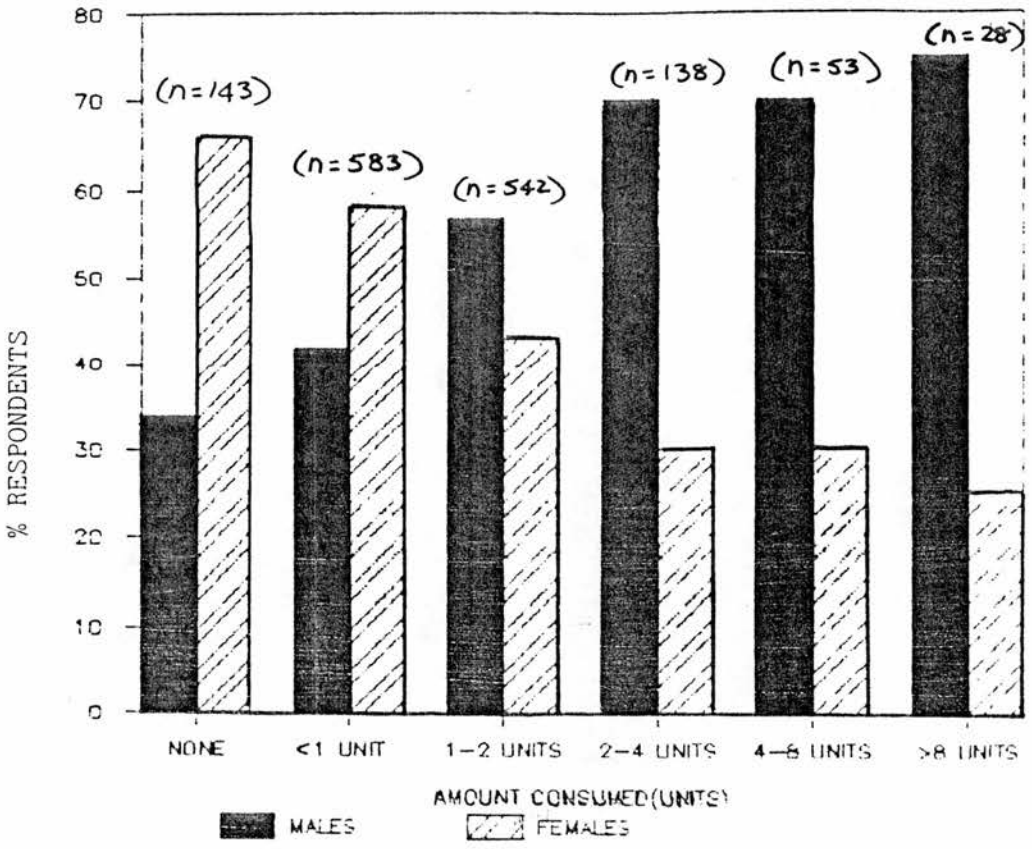


Figure 4.4a Gender Differences In Beer Consumption

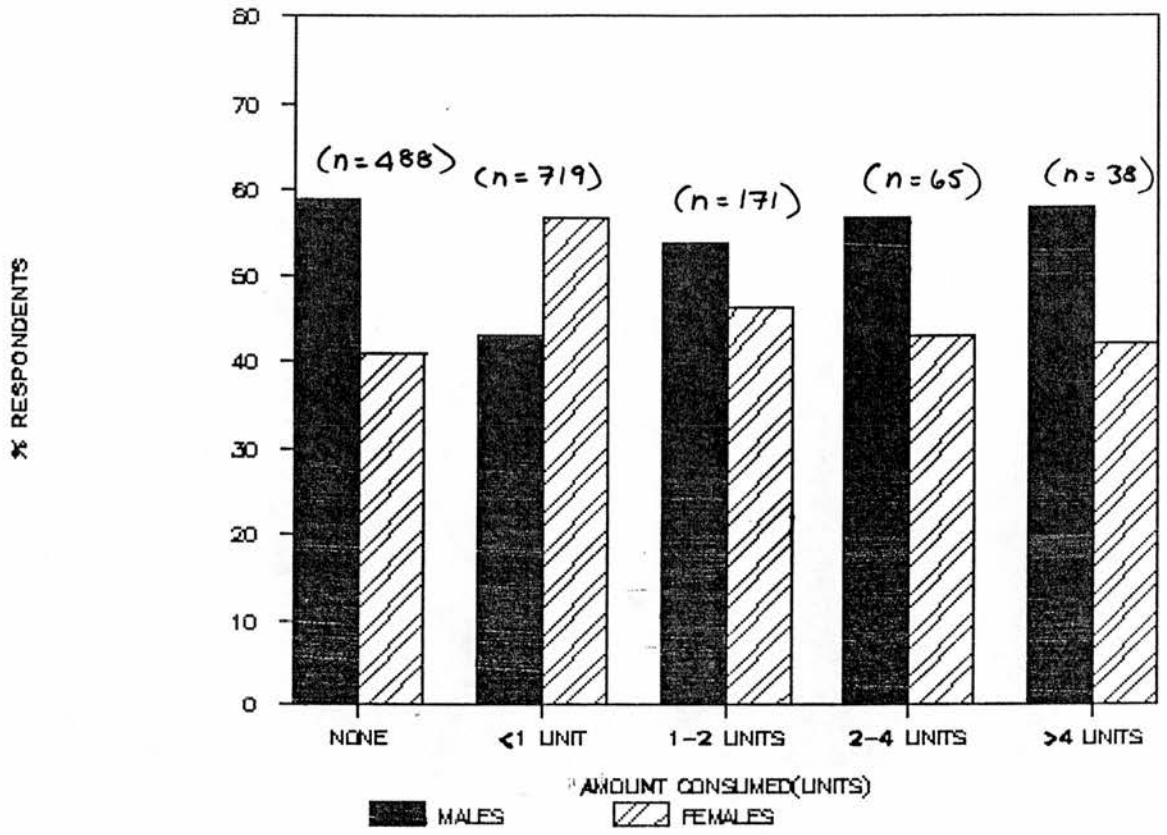


Figure 4.4b Gender Differences In Wine Consumption

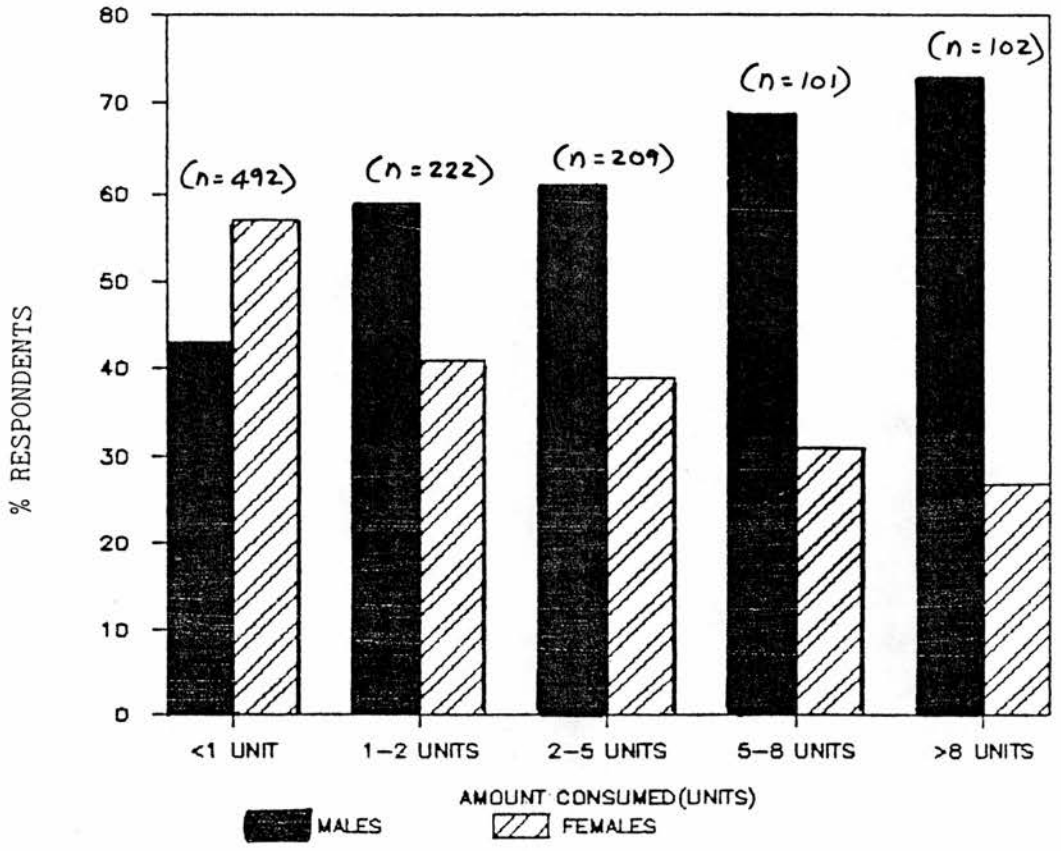


Figure 4.4c Gender Differences In Maximum Consumption

b. Frequency.

Respondents were asked when they last had any alcohol to drink; the responses are shown in Figure 4.5 below.

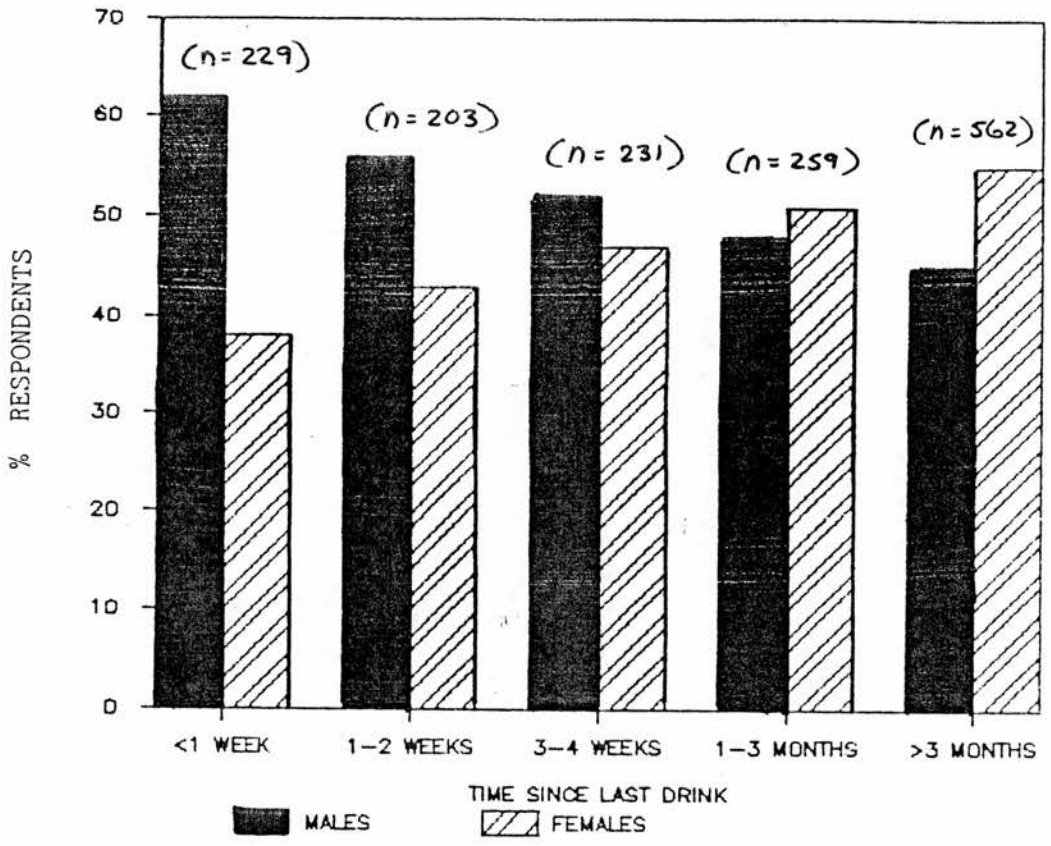


Figure 4.5 Gender Differences In Time Since Last Drink

From this it is clear that females were more likely than males to state that it had been 1 to 3 months or more since they had drunk any alcohol. On the other hand, of the 229 respondents who reported having consumed alcohol within the last week, 62 per cent were male (X^2 = 21.1; d.f. = 4; $p<0.001$).

Males were more likely to report having first tasted alcohol at an early age than were females (X^2 = 38.85; d.f. = 4; $p<0.001$). Of those respondents who reported having first tasted alcohol under eight years of age, 57 per cent were males. Males were also significantly more likely than females to have been offered alcohol by their father/step-father (X^2 = 17.66; d.f. = 1; $p<0.001$). Although only 13 per cent of the study group reported

having consumed alcohol outside in a street or a park, 67 per cent of these were males. Females were significantly less likely to drink in the open air ($X^2 = 19.4$; d.f. = 1; $p<0.001$).

c. Consequences of alcohol consumption.

As would be expected from their overall higher consumption of alcohol, males reported greater experience of its effects than females. This is illustrated in Table 4.5.

Table 4.5. Experience of Alcohol Related Consequences

Alcohol Related Consequence	Percent Responding 'YES' Males	Females	X^2	p
feel relaxed	33	27	5.23	0.05
feel sick	34	29	4.07	0.05
feel aggressive	7	4	5.97	0.01
feel argumentative	12	6	14.17	0.001
been told off by adults for drinking alcohol	25	18	7.58	0.001
experienced an alcohol related accident or injury	6	3	7.06	0.01
ever feel guilty about own alcohol consumption	15	10	9.01	0.005
ever had a hangover	21	17	4.62	0.05

d. Knowledge about alcohol.

The total number of items correct and the total wrong in the knowledge 'quiz' were compared for males and females. Males featured notably in both categories, i.e. males had more items 'correct' than females, but also had more items incorrect. This was explained by the fact that females were significantly more likely than males to select the 'don't know' option ($t = 7.26$; d.f. = 1515; $p<0.001$). It is only possible to speculate why this should be so. One plausible explanation could be that males are more influenced by social expectations concerning their knowledge about alcohol. In other words, it may not be consistent with a macho image for adolescent males to admit that they do not know specific facts about alcohol. Rather than face a possible loss of image, male adolescents may be more likely than their female counterparts to risk ticking the wrong answer.

e. Reasons Given For Drinking Alcohol

Males were significantly more likely than females to report that they drank alcohol for the reasons reproduced in Table 4.6.

Table 4.6 Gender Differences in Reasons for Drinking Alcohol

Reasons for drinking	Percent Responding 'YES' Males	Females	X^2	p
So as not to be the odd one out in a group	27	20	11.21	0.001
To help me mix more easily with other people	20	12	21.57	0.001
To help me talk to the opposite sex more easily	16	10	13.12	0.001
To look good in front of other people	15	9	12.66	0.001

These male-dominated explanations appear to reinforce the lack of confidence and concern with image apparently exhibited by male respondents in the questions on alcohol related knowledge.

Attitudes about Alcohol

There were no significant differences between males and females in the study group in their self-reported attitudes to alcohol.

Tobacco and Illicit Drug Use

As noted earlier, the incidence of illicit drug use in this study was too low to allow statistical analyses which would identify any gender differences in illicit drug use.

However, such comparisons were possible on the information about smoking. Although males and females were equally represented in those who reported that they had ever smoked tobacco, the pattern of smoking behaviour at the time of the survey was significantly different for males and females. These differences are illustrated below in Figure 4.6.

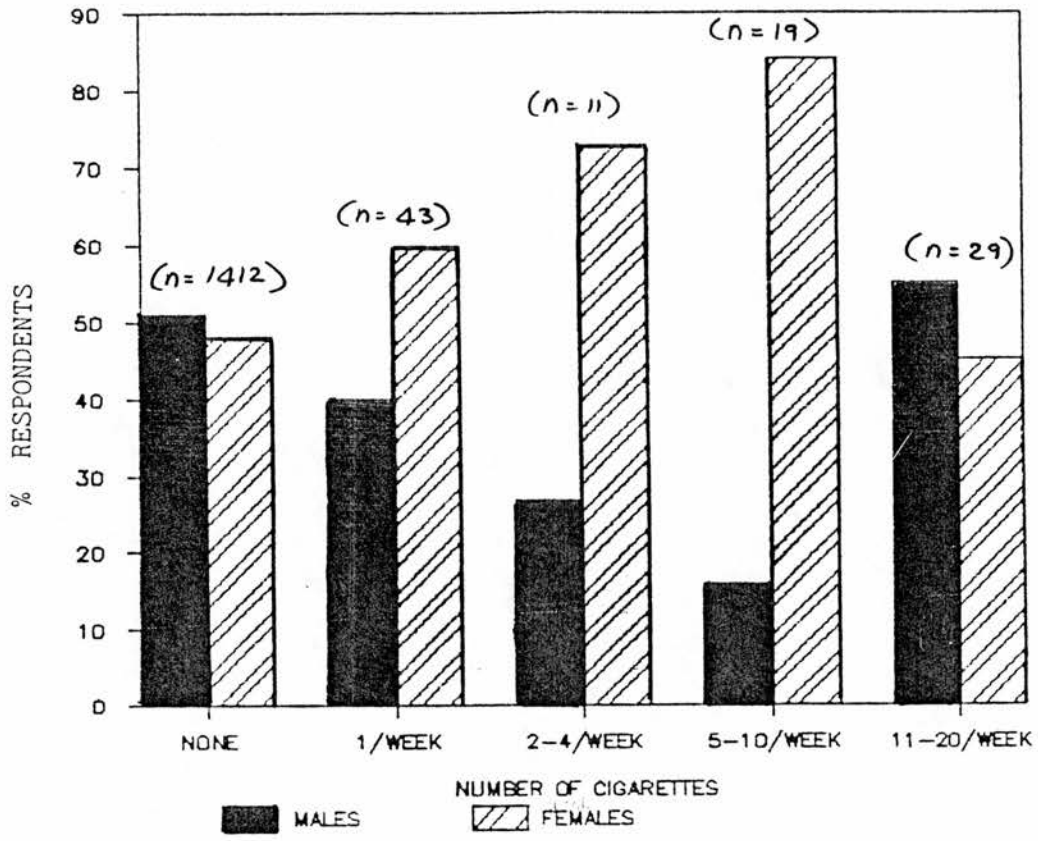


Figure 4.6 Gender Differences In Current Tobacco Use

It can be seen that females outnumber males in the categories representing one to ten cigarettes per week. Only when this increases to a figure of eleven to twenty do males overtake females. It should be remembered that the percentages illustrated in Figure 4.6 are taken from a total of 102 respondents, since only 6 per cent of the study group reported that they smoked at the time of survey.

4.2.6 Gender Differences - Comparison with Other Studies

The differences between 12 to 13 year old males and females identified in the present study are very similar to those in the British national survey and other relevant studies. Even when comparisons are made internationally, there appears to be a common general trend. This is discussed below.

Age of First Taste

In a review of data from twenty eight countries, Ahlström (1988) concluded that females generally first taste alcohol one year later than males. In the United States, Johnston et al. (1977), in a national survey of high school seniors, found that more American males than females had tried an alcoholic drink by age 14. This pattern of earlier male experience of alcohol is also found in the present study.

Frequency of Consumption

As in this study, Marsh et al. (1986) in their national survey found that 13 year old males were more likely than their female counterparts to report having consumed alcohol in the previous seven days. British surveys of slightly older adolescents suggest that this is a gender difference which does not disappear with age (Plant et al. 1985; Marsh et al. 1986). A similar trend is indicated by international data. For example, Ahlström (1987) showed that between 1976 and 1984 in Finland, there was a marked drop in frequency of consumption for 15 to 24 year olds of both sexes. However in all age groups, females still used alcohol less frequently than males. A similar pattern of differences between males and females was identified amongst high school students in the United States (Johnston et al. 1977).

Effects of alcohol

The questions concerning experience of the effects of alcohol consumption in this study are similar to those used in the 1986 national survey of British 13 to 17 year olds, and in the follow-up study of 15 and 19 year olds in the Lothian region of Scotland. Once again, similar findings emerge in all three surveys, with males more likely than females to report having experienced negative or unpleasant effects.

Tobacco Use

A high percentage of both males and females reported that they do not smoke. However the trend in female cigarette smoking identified in this study and reported in detail from a nationwide sample by Goddard

and Ikin (1987) suggests that adolescent females may be more reluctant than males to abstain. This has important implications for future tobacco education initiatives.

4.3 Summary and Conclusions

The majority of 12 to 13 year olds in this study would appear to drink alcohol neither frequently nor excessively. Despite this, the effects of intoxication have already been experienced by a considerable proportion of respondents. In general, the findings here serve to reinforce the argument that alcohol use amongst young people in Britain is more frequent than illicit drugs use. The results from this study show similar trends to other surveys of young people and alcohol, although it has to be noted that only a limited number of these surveys include the 12 to 13 year old age group.

Finally, important implications arise for alcohol education amongst school pupils. Relevant education must be based on what young people already know about alcohol, what they feel about it and how they use it. The data from the baseline survey suggest that for this age group at least, the educational emphasis should be on improving knowledge about alcohol and its effects, including information on the strength of alcoholic drinks and an awareness of the risks of even occasional intoxication. It was also suggested that the target group, especially males, were already beginning to conform to popular social images in relation to alcohol. Consideration of social influences on consumption would thus seem to be a potentially useful topic for inclusion. Such an approach underlies the alcohol education package developed as part of the evaluation study discussed in this thesis. Details of the development of the teaching package and a description of its content will form the basis of the next chapter.

CHAPTER 5

DEVELOPING THE ALCOHOL EDUCATION INTERVENTION

This chapter will concentrate on the alcohol education package which was specially devised for the research study. Details will be given about how the package was developed, piloted and then implemented in the study group schools. The rationale underlying the teaching materials will be considered, with specific elaboration of the theoretical framework on which the package is based. The role of teachers using the package will be considered, acknowledging the importance of implementation which was highlighted in Chapter two. All of these issues will be discussed in relation to health education in general.

The World Health Organisation has defined health as 'a state of complete physical, mental and social well-being, not merely the absence of disease and infirmity' (cited in Schools Council/Health Education Council Project 1984). Such a definition removes the concept of health from an exclusively medical setting, and broadens the issues into the wider community. Stimulated by this approach, the Schools Council/ Health Education Council Project (1984) has highlighted the role of the educational sector in providing health education:

> 'The health problems facing society today are more concerned with individual behaviour or life style than with environmental health and infectious diseases. If we are to promote positive health as well as to prevent ill-health, health education in schools and colleges can contribute much to that endeavour'. (Schools Council/Health Education Council Project 1984: Introductory Handbook: 1)

The aims of such health education include helping young people to appreciate that they have some control over their own health and that their future health can be influenced by conscious choices and appropriate lifestyles.

Critics of this approach to health education may argue that placing so much emphasis on the individual is little more than a 'victim blaming' approach. But as argued in section 1.6.4, education is necessary to stimulate political will. This in turn is ultimately required to bring about

change in any society. This may be especially true in the field of health education and subsequent change in health related behaviour.

5.1 DEVELOPING A HEALTH EDUCATION PACKAGE

In developing any health education programme, it is important to avoid producing a miscellaneous collection of resources with no clear overall aims or target group.

5.1.1 Programme Planning

a) A General Framework

The planning stage is crucial to the development of any prevention initiative in order to ensure comprehensiveness and continuity of both content and approach. In addition, thoughtful planning should enable those involved to gain an overview of the initiative in its entirety, without individual components becoming shrouded in complex detail.

A guide to the planning of prevention programmes was included in a recent government publication in the USA (Office for Substance Abuse Prevention 1989). Although targeted at community initiatives, most of the steps identified can usefully be applied to a school-based programme. These guidelines provide a sequence of questions which address in a practical way the key issues in the development of an alcohol education, or indeed any health education programme. The issues are summarised in Table 5.1, and discussed in the text.

Table 5.1. Basic Questions Addressed During the Planning Process

Planning Step	Basic Prevention Planning Issue
Needs assessment	What alcohol and other drug problems does the community need to address?
Development of goals	What do prevention activists want to achieve during the next several years?
Development of objectives	What quantifiable results can be achieved in the near future?
Identification of resources	What resources does the program need to achieve the objectives?
Identification of funding sources	Where will the money come from?
Assignment of leadership tasks	Who is responsible for each part of the prevention program?
Implementation	What procedures will keep the program on track?
Evaluation	How can the community determine whether the objectives are met?
Program revision	What changes are needed to improve the program?

(Reproduced from DHHS Publication No. (ADM) 89-1649 p.X11)

In order to answer the questions at each step of this planning model, programme planners must seek the relevant information and then use this to make rational decisions. All programmes require accurate knowledge of the target group, and of the appropriate patterns of health related behaviours within that population. There should also be some consideration of what initiatives have already been taken. This information can then be used to formulate long-term programme goals which accurately reflect any problems identified. The shorter term and more specific programme objectives should be defined as single quantifiable steps which have to be completed en route to goal achievement. The specification of objectives will in turn determine the resources necessary. These should include consideration of time and individual commitment in addition to the more obvious physical resources such as curriculum materials. The financial cost to programme users will always be a major consideration, as will

allocation of responsibility and procedures for implementation. In some respects these last three steps are pre-determined in a school setting, insofar as any programme initiative will have to be implemented within fairly rigid constraints. In the context of this thesis, evaluation, the final stage in the planning model, is seen as the crux of any new prevention programme. It is during the planning phase that strategies must be adopted to establish whether or not the objectives of the programme have been achieved. The results of the outcome evaluation should then serve to identify any necessary changes and improvements to the programme.

b) Specific Application to the Present Study.

Needs assessment: In this study, the first step in planning a school-based alcohol education package had been to assess the needs of the potential consumers i.e. the educationalists who would ultimately use the resource. This 'needs assessment', conducted as a feasibility study to the present project, had identified demand for a short 'user-friendly' pack with content relevant to the lifestyles of the young people for whom it was intended.

The long term goal of this intervention was to encourage responsible use (and therefore discourage misuse) of alcohol among young people.

Objectives: The specific learning objectives associated with each activity can be found in the copy of the package included in Appendix 5. At the planning phase, the short-term objective of the proposed programme was to produce a shift in the alcohol related knowledge, attitudes and behaviour of the target group.

Funding sources for the development of an alcohol education package had already been secured. However costs also had to be considered in the longer term perspective, on the assumption that the education resource would ultimately become a commercial product for schools to purchase. Minimal cost had already been identified as an important factor in the needs assessment, given that education authorities and individual schools do not have much funding to allocate to alcohol education. It was agreed that wherever possible existing curriculum materials would be incorporated into the new package as appropriate.

Evaluation, as already noted, was an integral part of the present research project. Chapter six will focus on the qualitative aspects of the evaluation in the form of comments from teachers and pupils who participated in the educational initiative. Chapter seven will give a detailed account of the quantitative evaluation, with specific consideration of the hypotheses, methodology and results. The implications of the evaluation results will be considered in terms of both the short term objectives and longer term goals of this particular intervention. Programme revision suggested by these results will also be discussed.

5.1.2 Programme implementation

a) A General Framework

As noted in Table 5.1 implementation issues should be an integral part of the planning process. The importance of implementation has already been identified in the literature review in Chapter two, and there is no doubt that such procedures must be considered before any health education programme is introduced into a school or college setting. For this purpose the present project drew heavily on a set of guidelines for school-based health education co-ordinators, published by the Schools Council/Health Education Council (1984). Although intended to facilitate the implementation of a programme encompassing all aspects of health education, this document was found to be of practical relevance in the developmental phase of the present alcohol education initiative. Because of their usefulness to this research, these guidelines will be considered in detail here. They take the form of six questions to be asked of the proposed programme:

WHERE? This refers to the context of the implementation e.g. its place within the existing curriculum.

HOW? This refers to the methods of the implementation e.g. didactic or non-didactic; teacher- or pupil-centred.

WHAT? This refers to content of the proposed programme e.g. is it primarily problem focused, topic centred, aims related.

WHEN? This refers to the developmental stage of the proposed target group (and thus raises implications about the group's readiness for the programme).

FOR WHOM? This refers again to the proposed target population e.g. all pupils or some pupils.

BY WHOM? This refers to staffing e.g. will the health education be implemented and taught by specially trained teachers, class teachers with no special training, or outsiders.

The answers to these questions are intended to assist health programme developers to focus on the principal aspects of their programme.

b) Specific Application to the Present Study

By limiting the topic of health education to alcohol, specific answers to the above questions can serve as useful pointers to the overall content and method of the teaching package in the present study. This is illustrated with reference to individual questions as discussed below under the relevant headings.

Context. In one respect alcohol education should have a readily identifiable slot in the curriculum, as a single aspect of more general health education. However its place within the curriculum is not always clear. For instance some aspects of alcohol education, such as those concerning the chemistry or physiological effects of ethyl alcohol, already fit comfortably into the science curriculum. This, however, would exclude other issues such as social influences on alcohol consumption, which are more relevant to social education. In the present project it was necessary, for the purpose of evaluation, to ensure that the context of the alcohol education intervention was as similar as practically possible in all participating schools. Early discussions with potential participants indicated that the most acceptable place in the school curriculum would be that of personal and social education in England and Wales, and its equivalent, guidance, in Scottish schools.

Methods. Since alcohol education is neither a compulsory subject nor one which is formally assessed for individual achievement, a non-didactic approach emphasising pupil participation seemed most appropriate for the present research. This approach frees teachers from the responsibility of appearing as a "font of all knowledge", particularly important in a context where some of the content may be unfamiliar to the teacher. In addition, activity based learning focusing on small group work allows pupils to define their own boundaries on the programme content. This in turn enables them to relate the alcohol education to their own personal experience. This educational rationale is broadly in line with the psychological theory of George Kelly as applied to an educational context (Kelly 1970; Bannister and Salmon 1975; Pope and Keen 1981). Kelly's 'personal construct psychology' underlies a recent resource development for the teaching of science in secondary schools in England and Wales (Secondary Science Curriculum Review 1983), and is implicit in much of the health education material produced for school pupils. Inherent in Kelly's work are the concepts of individual freedom, relevance and activity of the learner. He saw learning as a personal exploration in which individuals build their own representational models of the world and pursue courses of action in relation to this model. Emphasis is placed on the person as a 'meaning-maker', with individual perceptions giving shape to the otherwise haphazard events in the environment (Fransella 1980). The model of 'man the scientist' inherent in this theory results from Kelly's view that individuals constantly test out their existing constructs (or hypotheses) against their environment. The extent to which existing constructs are validated will determine how far these are elaborated or modified.

Kelly's theory shares with other cognitive developmental theories (for example Piaget 1954, Bruner 1966) an emphasis on the interaction of the learner with the environment. This emphasis would recommend that learning activities be structured to take account of the individual perceptions of the learner. For Piaget these perceptions would be classified in terms of a fixed sequence of developmental stages. In this framework the role of the teacher is to facilitate the transition to the next (higher level) stage of cognitive development, as lucidly discussed in Donaldson (1978). Kelly's theory, on the other hand, does not incorporate stages of development common to all individuals. Instead it places the fundamental

emphasis on individual differences in the meaning each person makes of his/her unique environment.

In applying Kelly's personal construct psychology to curriculum development, or more specifically to the development of an alcohol education resource, the starting point should be to encourage students to make explicit the personal knowledge, attitudes and skills they hold in relation to the topic for discussion. This introductory stage can then be built on by providing open-ended activities in which students have the freedom to explore and experiment with alternatives to their own concepts. To follow this, opportunities to try out new ideas and enhance the development of new skills should be provided in specific contexts which are relevant to students. In this way any learning experience will be construed actively according to individual requirements.

In the particular context of health education, it has been noted that 'to be understood and accepted ..... health education needs to relate to the sense people make of their personal experience' (Health Education Studies Unit 1982). The importance of the meanings which young people attach to behaviours such as smoking or getting drunk has already been acknowledged in Chapter two, in the problem behaviour theory of Jessor and Jessor (1977). More recently Jessor (1982) has argued that research needs to place greater emphasis on the adolescent's own perspective of health related behaviours since the uptake of such behaviours will ultimately be determined by the subjective meaning they have for the individual.

In this study, it was intended that the alcohol education, by placing emphasis on individual participation and open-ended activities, would have relevance for each participant and would be capable of integration into their personal constructions of reality. The chosen method of implementation was therefore intended to be pupil-centred.

Content. The methods selected in response to question two above will obviously influence content (and vice versa). The present alcohol education programme is not problem focused, other than in the general sense of considering 'problems' of adolescence, including social relationships, peer group pressure and parental attitudes, in the specific context of alcohol. Although this suggests a topic centred content (i.e.

alcohol) it was anticipated that some of the cognitive and social skills introduced would be transferable to other health issues. The content was also defined by the collective aims of the alcohol education package, and by the learning outcomes or educational objectives for individual activities.

Developmental Stage. As noted earlier, the chosen target group for this exercise was 12 to 13 year olds, most likely to be in their second year of secondary education. It is impossible to generalise about the developmental stage of any one age group as there will be considerable variation amongst individuals. This reinforces the appropriateness of pupil participation with its in-built flexibility, and more generally the Kellian approach with its emphasis on individual explorations.

The issue of relevance of content is important here. For instance, in the context of alcohol, the healthy choice for adolescents was agreed to be one which takes account of the risks of intoxication. This was seen to be of much greater relevance for young people than long-term risks of heavy alcohol consumption such as liver cirrhosis.

Target Population. As the age limit had already been decided, this question concerned whether the alcohol education programme should be aimed at all 12 to 13 year olds in school, or only at those who were perceived to be at greater risk. The responses to the preceding questions suggested a target population of all 12 to 13 year olds. Furthermore, the identification of those at risk would present major problems. As the discussion in Chapter one suggests, alcohol misuse among young people occurs for a variety of reasons, and there is no simple set of criteria by which such risk can be objectively assessed.

The issue then had to be considered whether the content of the package should be accessible to 12 to 13 year olds with learning difficulties, and therefore not wholly dependent on academic skills such as reading ability. Discussions with potential participants resulted in the decision to include 12 to 13 year olds of all abilities. Consequently the stimulus material would include pictorial and oral work, as well as written text.

Staffing. In order to adhere to the research design established for this alcohol education project, little flexibility in staffing was possible. All of the school staff who participated in the study were teachers of social

education, religious education or guidance. In practice, the Head Teacher of each school involved had agreed to take part in the research exercise, thus leaving individual teachers with little choice in the matter. In a more normal situation however, staffing is an important issue in the implementation of health education, and will be considered in the final chapter which examines some of the wider implications of the present study.

As already noted, one of the major innovations and strengths of this study was the close co-operation of experienced health/social education teachers in the development of the alcohol education package . Each education authority participating in the study had agreed to second two teachers for a short period to assist with the development of the package content. The next chapter describes the selection of these teachers in section 6.1, which considers their contribution to the process evaluation of the alcohol education package. Initial contacts were made with these teachers by telephone, followed by a personal visit. The aims of the study were made clear, stressing the importance of the contribution to be made by their personal and extensive experience in this type of education. Each of these teachers was asked to produce a rough draft of the kind of package he/she would recommend, incorporating any appropriate activities already devised and used in his/her own school. These teachers then attended an intensive two-day workshop in Edinburgh, where the preliminary content of the alcohol education intervention was established. The meeting began with a discussion of the aims of the study, and some time was spent reviewing the range of alcohol education materials known to be currently available to schools in Britain. The rough drafts produced by each teacher were circulated for discussion, and an overall outline of programme content was agreed for the present initiative. The group then sub-divided, each pair being given the task of designing specific pupil activities, to include learning objective(s), notes for teachers and activity details for pupil worksheets. After the meeting, the finer details of the package were negotiated by post, telephone and personal visits. These teachers would go on to be the 'specialist teachers' in the study, as identified by the t1 group in Figure 2.1. Their active involvement in the development of the alcohol education package was perceived as a simulated in-service training, in advance of teaching the package. This was

in contrast to the 'non-specialist' t2 teachers, who would be asked to teach the package with no prior involvement in its development.

5.2 THE ALCOHOL EDUCATION PACKAGE

The version of the alcohol education package which was evaluated in this research has been reproduced in Appendix 5. This section will provide a detailed review of the content and aims of specific activities in the package, and the rationale underlying their inclusion.

5.2.1 The Manual for Teachers

The package comprised a manual for teachers and a master set of pupil worksheets. The manual provided guidelines for classroom administration and detailed learning outcomes for each of the individual pupil activities. In the introduction to this manual, teachers were informed of the overall aims of the package and its rationale.

It was explained that the principal purpose of the package was to help promote responsible use of alcohol amongst young people. It was not intended to advise young people that they must NEVER drink alcohol. This would have been a wholly unrealistic aim, since fewer than 10 per cent of the adult population in Britain are total abstainers (Royal College of Psychiatrists 1986). This statistic also justifies the argument that alcohol education must at some point in the school health education curriculum be differentiated from 'illicit drugs' education. By definition, illicit drug use involves breaking the law and the school's responsibility is seen as one of preventing such illegal behaviour. However alcohol consumption amongst the target age group is legal under certain circumstances (such as in the family home under parental supervision), thus making it more acceptable and practical to promote a message of "harm minimisation" or "low risk drinking".

It was made clear to participating teachers that the package was undergoing scientific evaluation for a research project, and therefore it was important for them to adhere as closely as possible to the guidelines for teaching the materials. It was acknowledged that such a prescriptive and

standardised approach was not likely to be popular, especially in the context of social education. However it was also made clear that such constraints would only be necessary during the evaluation phase, and that teachers would be free to use and/or adapt the materials in any way they wished after completion of the evaluation. All teachers who participated in the study appeared to appreciate the need for uniform procedures, and were extremely co-operative in this respect.

Justification for selecting a target age-group of 12 to 13 year olds was included in the Manual. Firstly it was noted that, as described in Chapter four, there is a considerable amount of evidence that by the ages of 12 and 13 the majority of British adolescents have some experience of drinking alcohol. Secondly, although at an anecdotal level, the majority of the educationalists whose experience contributed to this study believed that most school-based alcohol education currently begins too late, and, with one exception, they were unanimously in favour of involving 12 and 13 year olds in alcohol education.

Overall, the package was presented to teachers as having two principal aims:

1) To provide a framework which will allow pupils to think about alcohol in a way which is relevant to their own immediate and perceived future experience.

2) To help pupils begin to develop the necessary skills to make reasoned choices about alcohol.

The manual also explained how the content of the package was sub-divided into various activities, some for small group work and discussion, some for completion by individual pupils, and others for use with the class as a large group. These activities were reproduced on worksheets, a set of which was included in the Manual for Teachers. Where appropriate, correct answers were provided on the teacher's copy. Each pupil received his/her own personal set of worksheets.

5.2.2 Pupil Activities

The alcohol education programme began with an activity which did not refer specifically to alcohol. The first exercise was about choice and decision-making in a variety of every-day situations. It was intended to help adolescents realise that they are constantly having to make choices, and that their chosen option may include that of saying 'no'. In terms of the Kellian framework, it encouraged participants to begin to explore their own decision-making concepts and skills, and those of their peers. The second part of this activity was intended to encourage recognition of the need for accurate information to help make reasoned choices.

The package then went on to provide such information on the topic of alcohol. Pupils participated in activities which aimed to increase knowledge about alcohol and its effects on their bodies and behaviour. This included an exercise on the relative strengths of different alcoholic drinks, an aspect of the package which several of the participating teachers admitted was new information for them also. Such information was intended to dispel popular myths about alcohol. These included the (false) notion that cider has a much lower alcoholic content than beers, that all beers are the same strength, and that drinking spirits is more harmful than drinking beers. The activities on the effects of alcohol included references to the risks of intoxication. These focused on situations relevant to the lifestyles of 12 to 13 year olds, including swimming and cycling. The positive effects of alcohol were also acknowledged - for example its popular function as a 'social lubricant'. This follows the argument that teachers will more readily secure the confidence of their pupils in the objectivity of the alcohol programme if 'some attention is paid to enjoyment of responsible alcohol use' (Finn 1977: 18). It has already been noted that one of the aims of the education package was to stress relevance of content to the target group. For this reason the issue of driving a vehicle under the influence of alcohol was not included; nor were long-term effects of heavy consumption such as liver cirrhosis discussed. Despite this, it must be remembered that the open-ended nature of small group discussion would allow any adolescent with personal experience of such issues to raise them in the group if desired.

The emphasis then moved on to explore some of the major 'social influences' on youthful alcohol consumption. In Chapter two it was noted

that encouraging students to develop a critical awareness of such pressures may be an effective approach to educating young people about alcohol. In this package the particular social influences selected included peer group pressure, parental attitudes and media messages about alcohol, as recommended by Grant (1982). Peer group pressure and parental attitudes were examined by using fictitious case studies as a stimulus for small group discussion. The first step was to prompt open-ended discussion, allowing individuals to explore their own perceptions of the case study, and to compare them with others. Story completion was then offered as an individual activity in relation to these case-studies and optional role-play recommended if the teacher felt confident that this would be productive with her/his particular class. These latter two methods were intended to allow the young people not only to develop a critical awareness, but to practise some resistance to social pressure in a fictitious and ideally non-threatening situation. The enhancement activities thus provided the opportunity to test out any new ideas and skills explored during the discussion stage. In terms of the methodology of the study, it must be noted that inclusion of an optional activity could disrupt the standardised teaching required for evaluation. However role-play had been strongly argued for by two of the specialist teachers, and it was felt that they would have used it in any case, even if the option had not been part of the package. Questioning of all teachers who used the package in the study suggested that role play was pursued with only a small minority of pupils.

The activities examining the influence of the mass-media were two-fold. The negative image of alcohol prevalent in newspaper headlines, especially the tabloids, was presented, along with the positive image from alcohol advertisements. These activities encouraged pupils to analyse the contrasting messages and the techniques of presentation (e.g. the use of fear arousal headlines in tabloids, or the association of alcohol in advertisements with fun, sex-appeal, music, bright colours, sporting success and glamorous lifestyles). In addition, it was suggested that small group discussion be encouraged around the way in which alcohol is presented in television drama and soap-operas. The Manual for Teachers recommended that these activities be extended beyond the classroom to the family home, providing an opportunity for parental involvement in the alcohol education programme.

The final activity in the package was a 'quiz', which could be completed individually, in teams, or as a class group. The function of this activity was mainly one of consolidation, helping pupils to recap and assess for themselves what they had learned from the package. (This quiz was also the main component of the measure of alcohol related knowledge used in the questionnaire surveys).

Some of these activities incorporated alcohol education materials already available, (Teachers' Advisory Council on Alcohol and Drug Education 1984, and Scottish Health Education Group 1985). Wherever possible activities were illustrated, with cartoon-based humour playing a prominent role. Colour reproduction was utilised in the main evaluation study (not in the pilot) to provide stimulus material for the activity on alcohol advertising. Unfortunately this proved very costly, and it was only possible to provide one set of material of rather inferior quality for each class. In its final format, the package required about four hours of teaching time.

5.2.3 Piloting the Package

Before the start of the main study, the educational materials which resulted from the workshop in Edinburgh were tested in three large state comprehensive schools in Lothian region. One of these was situated in an area of severe social deprivation and one teacher there commented: 'If it goes down well here it will go down well anywhere!'.

A second pilot school was situated in a new town in the central lowland belt of Scotland, and the third had a catchment area which is mostly 'middle-class'. Head teachers of these schools were approached to arrange a meeting with the Principal Teacher of guidance and those of his/her staff who would be involved in teaching the alcohol education package for the pilot study. In each school it was made clear that the purpose of the pilot study was to highlight any aspects of the package which were impracticable, unanimously unpopular, or more generally potentially problematic. Constructive criticism was therefore encouraged. The materials used in the pilot study are reproduced in Appendix 3. They were used by 15 teachers and approximately 600 pupils. Overall, the

comments from both staff and pupils were very encouraging, with only a few negative reactions.

The following summary is based on written comments (in the form of completed 'feedback sheets') from teachers and pupils, and meetings with groups of teachers involved. Copies of the feedback forms are included in Appendix 4. The points noted below are those which indicated a need to modify specific aspects of the package.

The reactions among the three schools differed slightly; this may reflect a variety of factors, both outwith and within the school. Comments from each school are thus presented independently.

School 1 - (A large comprehensive with predominantly 'middle-class' catchment area).

A) Teachers' comments

The package was taught to the entire second year by three teachers, who were all enthusiastic about its content. The teaching slot was one 35 minute period per week. Their general advice can be summed up:

a) Individual worksheets should be combined into pupil workbooks - this would save administration time, and allow pupils to 'dip' back.

b) There should be more variation between individual, small group and class work.

c) Activity A on Worksheet 3 - 'Stop and Think' did not work - most groups simply argued.

B) Pupils' comments (feedback sheets returned by 166 pupils)

The most popular activity was: Worksheet 2 Activity C - 'Alcohol and Behaviour'. The reason most frequently given for this was 'it was interesting and fun to do'. The least popular activity was: Worksheet 4 Activity A - 'Jo from Jupiter'. The majority of pupils seem to have found the package interesting, but too long.

School 2 - (A large comprehensive in a new town)

A) Teachers' comments

The package was taught by seven teachers to the entire second year. A major difficulty was shortage of time. In this school the teaching slot was the tutor group period - the first twenty minutes of each day for four consecutive days. Distribution of individual worksheets sometimes left only 10 minutes for teaching, and as a result only two teachers completed the piloting. Three of the teachers were very enthusiastic and two (who had not completed the package) were quite negative. Their general advice:

a) More colour should be introduced: this would greatly improve activities such as the 'Alcohol Adverts'.

b) The emphasis on individual worksheets and small group work should be reduced, as it becomes repetitive.

B) Pupils' comments (feedback sheets returned by 34 pupils).

The most popular activity was: Worksheet 1 Activity A - 'It's Your Choice'. Comments suggested that pupils enjoyed this activity because it allows them to choose - there is no right or wrong answer.
The least popular activities were: Worksheet 3 Activity B - 'Alcohol Adverts' (No colour) and Worksheet 4 Activity A - 'Jo from Jupiter' ('Silly').

All the staff were critical of the quality of the stimulus material provided for the activity on alcohol advertisements and this may well have influenced pupils' reactions. Most pupils who responded were positive about the package as a whole, but requested some colour. Again, many said it 'Went on too long'.

School 3 - (A large comprehensive with a socially deprived catchment area).

A) Teachers' comments.

The package was taught by five teachers to the entire second year. As in school one, the package was allocated one 35 minute period per week. (This was unfortunately interrupted for two consecutive weeks so continuity was broken). Comments from three of the five teachers were positive, although they all agreed that more time would have been helpful,

particularly for the less able pupils. Again it was suggested that there should be less emphasis on individual and group work as the worksheets become repetitive.

B) Pupils' comments (feedback sheets returned from 25 pupils)

The most popular activity was: Worksheet 2 Activity C - 'Alcohol and Behaviour'. Reasons included 'interesting to learn about the effects of alcohol' and 'it was funny and sort of real'. The least popular activity was: Worksheet 3 Activity B - 'Alcohol Adverts' (for reasons similar to those noted for other schools) and Worksheet 1 Activity B 'More Difficult Choices' ('didn't understand').

Once again, most pupils commented that the package was quite interesting but too long.

In all three schools, teachers liked Worksheet 3 Activity B - 'At the Disco' while Worksheet 3 Activity A - 'Stop and Think' was almost unanimously unpopular, largely because of difficulty in guiding group discussion towards any kind of consensus. On the negative side, the majority of pupils and staff found the package too long and a little repetitive in format. The vast majority of pupils reported learning something new. This was most frequently concerned with the equivalence of different alcoholic drinks, and/or the effects of alcohol on behaviour.

As a result of this pilot study, the major changes proposed to the package were:

a) Omit Worksheet 4 - Activity A 'Jo from Jupiter' and Worksheet 3 - Activity A 'Stop and Think'

b) Substantial alteration to Worksheet 2 - Activity C 'Alcohol and Behaviour'.

Although this was a very popular activity, some of the content was open to ambiguous interpretation and a little complex, especially for the less able pupil. But the cartoons, very popular with pupils in the pilot study, would be retained.

c) All worksheets should be combined into pupil workbooks.

d) Coloured adverts should be used as stimulus material in Worksheet 3 - Activity B, and this activity, along with the final 'Quiz' should be suggested as a class activity.

Other minor improvements were made to the text and illustration, especially in terms of layout and quality of artwork.

These recommendations were all incorporated into the version of the package used for the main evaluation study. Once again, feedback was obtained from teachers and pupils. This is discussed in the next chapter.

CHAPTER 6

PROCESS EVALUATION

QUALITATIVE FINDINGS FROM THE CLASSROOM

6.1 FEEDBACK FROM TEACHERS

6.1.1 The Specialist Teachers

It has already been noted that five teachers were seconded for a period of approximately three weeks to work on the project, and in particular to assist with the development of the alcohol education package. These teachers were selected with the assistance of senior advisers in their education authority, and were chosen primarily for their experience, commitment and proven capabilities in the field of health/social education. In each region the teacher(s) recommended by the senior adviser were visited by the author to discuss potential involvement in the project; all were willing to take on the role of 'specialist teacher' in their region, despite the additional work load that this would entail. As would be expected within the English, Welsh and Scottish education systems, none of the five teachers who participated in this way taught health/social education on a full-time basis, and all had teaching commitments in their own discipline. These were distributed as shown in Table 6.1 .

Table 6.1. Biographical Details of the Specialist Teachers

Teacher	Age	Sex	Years of Experience	Discipline
a	50+	F	20	Chemistry
b	40-45	F	15	Mathematics
c	40-45	F	15	Humanities
d	35-40	M	10	Religious Studies
e	25-30	M	5	Modern Languages

At the end of stage two of the study i.e. the teaching of the alcohol education, each of these five teachers was asked to submit a written report of their experiences on the project. One report was never received as the teacher involved died. Extracts from the reports of the other four teachers form the remainder of this section. The primary objective of this research was to conduct a quantitative outcome evaluation to assess the impact of the alcohol education intervention. In addition, however, qualitative feedback from teachers and pupils who participated in the education was collected to provide a simple process evaluation.

A copy of the version of the package used in the evaluation study can be found in Appendix 5. Teaching of the alcohol education was standardised, by requesting close adherence to the guidelines in the Manual for Teachers. In practice however, it is impossible to rule out totally the individual influence of any one teacher. Pupils' receptiveness to the alcohol education package will be dependent to some extent on such teacher effect. This is particularly true in terms of rapport between teacher and pupils, and of the teacher's confidence and skills in handling small group work. More generally, the teacher's personal competence in teaching material which places such a heavy emphasis on pupil participation must play an important role. Against this, however, as already detailed in Chapter three, the 'specialist' teachers in this study were chosen precisely for their experience and skills in these areas. Such abilities are a basic attribute of all teachers actively involved in social education of any kind. Furthermore, the 'non-specialist' teachers who participated in this evaluation study all had some involvement in health and social education programmes in addition to teaching their own subject. By involving only

teachers with this kind of experience, it was intended to minimise variation due to teacher effect.

Involvement of the 'specialist' teachers in the development of the package was seen by participants as a useful experience, and was summed up by one of them as follows:

> 'The meeting with teachers to produce the package showed that there was fairly close agreement that:
> - alcohol education needed to be tackled
> - the methods were similar to those used in other areas of the curriculum
> - a variety of approaches should be tried
> - teachers might eventually be able to choose from a range of material
>
> The [resulting] package was very acceptable to us in material content and methodology. In future we would incorporate some slide or film material to vary the style of presentation of information.'

This last comment reflects one of the more controversial issues discussed amongst these teachers during development of the package, with three of the five insisting that a video or film should be included as a trigger to group discussion. However, agreement was finally reached that this could not be included in the evaluation study for two main reasons:

i) it would be too costly to produce within the budget of the project, and

ii) not all schools could assume access to the necessary equipment at an appropriate point in the alcohol education programme. This could have been particularly problematic during the evaluation study where the need for standardised teaching permitted little flexibility.

The Manual for Teachers was found to be useful by these 'specialist' teachers, who appear to have experienced little difficulty in following the guidelines for teaching each activity in the package. One teacher reported:

> 'The Teacher's Manual was useful. I found it easy to teach the package. Although I found the worksheet on the effects of alcohol on the body was not easy to understand, the pupils had no problems'.

And a second said:

'I generally found the groups worked well. I did not find the prescriptive approach of the Teacher's Manual unacceptable or frustrating. This was probably because of the novelty of the topic for our pupils. If they had regarded it as the same old stuff more innovative teaching approaches might have been required to add interest.'

A third teacher concluded:

'The material was easy to use and generally well received by pupils'.

As might be predicted, the issue of how the alcohol education package would be utilised in their schools after the research study was completed raised a variety of comments. Perceived future implementation of alcohol education depends very much on existing provision of timetable space, resources and facilities for such a minority subject. One teacher took the opportunity in her report to indicate some general as well as specific recommendations:

'Health Education should ideally be included in the Core Curriculum so that all pupils have the information which they require. There is no need to try to avoid duplication of topics e.g. by biology and social education, since there can be variety in approach. In later years pupils should be directed towards the effect of alcohol abuse on relationships and attitudes. The pupil's ability to solve problems should also be an approach to this topic. Alcohol education should be treated separately from drug education - the use of alcohol is socially acceptable and so young people are expected to make acceptable decisions on the position they are going to take up when forced to make a choice. The longer-term effects of alcohol abuse may be included with drug abuse.'

More specifically she indicated that:

'In the school situation, we would present this as part of a) an Alcohol Education programme presented cyclically over two or three years with presentations to suit each group, and b) A Health Education programme. We did not consider the package as part of a possible "whole school" programme'.

For this teacher the format for such a programme was perceived more in terms of the topic of alcohol misuse being discussed in a specific context chosen for its appropriateness to a particular year group. She went on to recommend that:

'Teachers involved in each school might be asked to decide on aspects, materials and methods to be used with each year group in the school. Consideration might be given to the allocation of the following topics to appropriate year groups:

Alcohol abuse and
- non-accidental injury of children
- single parents
- road accidents
- cost of treatment of alcohol victims
- cost of treatment of alcoholics
- related disease
- the G.P.
- the family
- employment'

The timing of the alcohol educational intervention in the evaluation study was favoured. One teacher reported that:

'We feel the timing was right because many of these pupils drink alcohol'.

And a second participant in a different school concluded that:

'The age group was ideal - the majority of our pupils of that age are interested in alcohol'.

However the latter teacher felt that continued use of the package in its entirety would require more formal allocation to alcohol education in the timetable, ideally to allow one social education period (40 minutes) per week for the duration of the package.

Perhaps all these ideas can best be summarised by the opening comment in one teacher's report:

'The package was very useful and enjoyable to teach. I will definitely use at least some of the materials in years to come'.

It could be argued that those teachers who provided reports, because of their close involvement in the development of the package were, not unnaturally, predisposed to be positive about it. However, they were also quite willing to make suggestions for improvements, based on their experience of using the materials with pupils.

One criticism which emerged unanimously from the 'specialist' teachers was shortage of time:

'I would have liked more time to develop and/or debrief group discussions'

and

'more time would have facilitated build-up of rapport (between teacher and pupils)'.

A second source of criticism for all specialist teachers was the visual quality of the stimulus materials. As already noted, several of these teachers had argued strongly for inclusion of a film or video. Although this had not formed part of the alcohol education package formally evaluated, the desire for future inclusion of such a resource was reinforced in the reports:

'In future we would incorporate some slide or film material to vary the style of presentation of information'.

Two further teachers suggested that the fictitious case study used to stimulate discussion about parental attitudes and peer group pressure

'needs a video as an added stimulus. On its own the story is too short and the outcomes too obvious'.

6.1.2 The 'Non-Specialist' Teachers

In addition to the detailed written reports from the 'specialist' teachers, feedback was also requested from the twenty-three teachers in the project who had been asked to teach the alcohol education package without any prior involvement in its development. Included with each copy of the Manual for Teachers was a short 'Feedback Form for Teachers' (see Appendix 6), to be filled in and returned to the Alcohol Research Group on completion of the teaching package (see Appendix 5). The questions in the form were intended to provide information on these teachers' reactions to their initial experience of the package. Specific information was sought on a) agreement or otherwise with the overall rationale of the alcohol education, b) the objectives for individual pupil activities and c) the appropriateness of the content for the target group. Comments were also invited on the teaching methods used in the package, with the opportunity to highlight any component of the materials which they did not like having to teach, and any difficulties experienced. A final open-ended question invited general comments on their experience of teaching the alcohol education package. At the beginning of the form, teachers were reminded that it was completely anonymous, and were

therefore encouraged to be honest in all their comments. In addition it was made clear that constructive criticism would be welcomed, as it formed an important component of the evaluation study. In their professional capacity, classroom teachers seldom have the opportunity to influence the fundamental content of their curriculum, and to participate in externally conducted formative evaluation. It was therefore hoped that they would appreciate and take advantage of this opportunity to participate actively in the formulation and/or modification of these new curriculum materials for alcohol education.

Feedback forms were returned by eighteen teachers, covering a wide range of age, academic discipline and experience of teaching. All these staff had in common the fact that they were currently involved in teaching health/social education, this being the principal reason for their inclusion in the study. However, even at this level, there was a wide variation in experience, from principal teacher of social education with over ten years of experience, to a 'newcomer' with only two month's experience in this area of teaching.

Some of the more critical comments resulting from these forms included:

> 'Any final production [of the package] would no doubt have a professional layout and colour. The pupils in the main found the lack of colour and the layout uninspiring'.
>
> 'They really need a film or video starter stimulus'.
>
> 'The adverts needed to be poster size, and the pupils could have done poster work to go with this exercise'.
>
> 'We [This is assumed to refer to teacher and pupils] tended to feel there was a lack of variety'.
>
> 'All in all I felt the material wasn't "teacher proof". We delivered it as instructed, but without input of our own (which we restrained ourselves from doing) it was a bit arid'.

There was unanimous agreement with the overall rationale of the package, and only three out of the eighteen staff felt that any of the defined objectives for individual activities in the package were unrealistic. The use of small group work was popular, with only one teacher experiencing any great difficulty in maintaining group discussion.

Responses to the final open-ended question were encouraging, with the majority expressing a positive reaction to the approach of the package, and to its limited content. Most who responded here said they would continue to make use of the materials and several mirrored the comment: 'I look forward to any new, glossy version'. Only one teacher expressed reservations about future use; she felt that the materials had been problematic for less able pupils, and were in any case more relevant to older pupils. The two most frequent recommendations were for:

a) additional visual aids, especially for the activity on alcohol advertising.

b) additional information about the effects of alcohol, perhaps including a video.

Most teachers expressed the need for more time and flexibility in presentation of the package.

6.2 FEEDBACK FROM PUPILS

Pupils who participated in the study were also asked to complete a 'feedback sheet' at the end of the alcohol education package. As with the teachers, these sheets were completed anonymously. Once again, this confidentiality was strongly reinforced in order to urge the young people to be honest in their comments. Pupil feedback was obtained on completion of the alcohol education, and was administered internally by school staff, without formal supervision by members of the research team. Although it was possible for teachers to look through the completed forms from their classes, there was no indication of pupil identity. In fact some teachers were interested to read these forms before posting them off to the Alcohol Research Group. As several of the staff noted, pupils very seldom have an opportunity to comment formally on curriculum matters, especially to 'outsiders'. Perhaps because of this the teachers felt that the forms had been completed quite honestly. As would be expected, however, some of the young people had not taken the exercise seriously, and filled in meaningless answers. Such forms were rejected.

The pupils were asked which activity in the alcohol education package they had liked most, and which they had liked least. In each case they were asked to explain their answer. They were then asked if they had learned anything from the package that they did not already know, and if so, what. Finally, as in the feedback form for teachers, there was an open-ended question inviting pupils to make any other comments about the package.

For a variety of reasons, the pupil feedback data have not been analysed in any quantitative sense. The nature of the data collection was very crude, and it cannot be assumed that pupils were completely uninhibited when completing the forms, depending on the nature of teacher supervision at the time. There is also clear evidence from the forms that several youngsters copied each other's answers. Furthermore, there is no guarantee that staff (at any level in the school hierarchy) did not select those forms which were posted to the Alcohol Research Group, perhaps removing any which were excessively rude or negative. Such forms could have been perceived as reflecting badly on the school or on a particular teacher.

Forms were received from over 500 pupils, out of a possible 1,055 respondents. The main explanation for the missing data is that two schools involved in teaching the alcohol education package failed to return the forms for their pupils despite repeated requests by the researcher. This obviously introduces a potential bias into the data that were received. Missing reports from schools which did return the forms can be explained by pupil absenteeism, and by the fact that not all teachers in each school completed this final exercise with their class.

Despite these methodological problems, the pupil data do give some limited but useful qualitative insight into how the package was perceived by the young people for whom it was developed.

Predictably, there was a full range of responses to the questions concerning popularity of individual activities in the education package. Activities which were rated as most popular with some pupils were also rated as least popular with others. For instance, many pupils rated the introductory activity on making choices as 'the best' for reasons such as: 'It was easy to understand', 'It was fun to do' and 'because it was things to

do with us'. Conversely, a similar proportion of pupils rated this activity as the one they liked least. The reasons given for this included: 'Because it was quite boring', 'Some of the choices were hard', 'Because it doesn't tell a lot', 'Because it was difficult to think in the way that we had to'.

The reasons given to justify choice of activity as most or least liked were generally uninformative, with 'it was boring' the most frequently quoted reason for not liking an activity. Obviously, the way in which any activity is rated by an individual pupil will depend on a variety of factors, including personal interests, background knowledge and experience, and the way in which the activity is presented by the class teacher.

Given these difficulties, it is interesting to observe that there was a clear indication that the two most factual activities were rated as most popular across all schools who returned forms. These exercises concerned the equivalent alcoholic strengths of different drinks and the effects of alcohol both on the body and on behaviour. Reasons given for choosing the first of these as the activity liked most included:

'Because it was helpful and interesting'

'Because it shows how much alcohol really was in the drink'

'Because it told the readers something about quantities of drinks'

These observations were reinforced in the responses to the question asking pupils what, if anything, they had learned from the alcohol education package. The same two 'factual' activities featured repeatedly here with the exercise on equivalent alcoholic strengths being the most frequently quoted. Some examples of these responses are reproduced below:

'I learnt the measures of Alcohol'

'How much wine and how much beer etc'

'About some of the Units of Alcohol'

'The amounts of alcohol compared in different alcohol drinks, and what can happen to you'

'I didn't know that some small drinks are worse than some large drinks'

'Alcohol harms you as much as drugs'

'I have learned what drink can do to you'

'that eating with drink slows down the effect'

'that it (alcohol) is more dangerous to a woman than to a man'

'Alcohol is dangerous for bad health and a lot is bad for your body'

Finally, a selection of responses to the open-ended question asking for general comments on the package is quoted below. Many pupils omitted this question, but once again a wide range of responses occurred amongst those who answered. Some of these were unprintable, and some were clearly negative:

'It was O.K. but boring'

'It was boring and pointless as no-one learnt hardly anything'

'It could of been better - too much writing'

'It was a bit long and would have been more interesting to have more drama'

'It was something to do during our Social Education lesson'

On balance however such comments were outweighed by a more positive reaction from the majority of respondents, including:

'It was interesting and fun to do'

'It will be useful when I get older'

'It made us think more about alcohol and how it effects us'

'It was a good exercise and put over messages good'

'Most of it was very interesting'

6.3 CONCLUSIONS AND IMPLICATIONS

As noted above, many of the comments from pupils were idiosyncratic, with several activities in the alcohol education package liked and disliked by similar proportions of pupils. However two activities which were observed to elicit a consistently positive response were those

giving factual information about alcohol. This could indicate a potential problem for the alcohol education package. In Chapter two it was noted that there is some evidence to suggest that substance misuse education which only gives factual information may encourage experimentation with the psychoactive substance in question. It follows then that this may be a potential risk for young people in the alcohol education study who rated the factual activities most highly. As already acknowledged, however, it is necessary to exercise caution in interpreting the qualitative data obtained in the present study. Firstly, the 'crudeness' of the data severely limits its validity and reliability. Furthermore it may be that the factual activities were referred to by more pupils simply because of the tangible nature of their content, with open-ended and abstract activities less likely to be recalled. Certainly there is little doubt that activities concerned with the development of skills and awareness of social influences have a much less concrete outcome, especially in the short term. The quantitative analysis discussed in Chapter seven includes an examination of how these young people's alcohol related attitudes and behaviour changed, as well as their factual knowledge about the substance. This will demonstrate that the alcohol education did have some influence beyond merely improving knowledge.

The qualitative information from teachers suggests that the programme successfully achieved its major objectives of providing educationalists with an alcohol education resource which was inexpensive, easy-to-use and demanded little preparation time or in-service training. In general, the package appeared to be welcomed in its existing structure, and most of the specific comments from teachers were encouraging. The most common criticisms concerned the poor production quality of the resource materials in the education package, and a lack of time to develop group work adequately. The participating teachers were very tolerant of the constraints imposed on their use of the package for the purposes of the research methodology. It is hoped that any problems related to these constraints will be overcome when the package is used in a non-experimental setting. Under such conditions teachers will be free to use the alcohol education materials as they wish, adjusting the content and timing to suit their specific timetable, and to meet the educational needs of any particular class or group of young people. Such flexibility should also

overcome some of the expressed difficulty with less able pupils, where the pace and presentation of the materials can be modified appropriately.

It is to be hoped that the alcohol education package will fit comfortably into an existing health education curriculum without excessive modification. However it must also be remembered that the package developed for the research study was self-contained, and evaluated as such. It follows that the findings from this evaluation may not hold for any subsequent versions of the package which have been subjected to a large amount of alteration, such as re-ordering or omission of activities.

Problems concerning the quality of the stimulus materials were evident in the comments from participating teachers. As noted in Chapter five, this has been rectified since completion of the research with professional publication of the alcohol education package (Bagnall 1990). Due to commercial sponsorship the cost of this improved version has been kept to a minimum, despite the use of colour and high quality materials as recommended by participants in the evaluation study.

Teachers who subsequently purchase the package for use in their schools will be free to supplement the resource in any way they choose, for example by the inclusion of an appropriate video or the use of additional role-play activities.

In conclusion, this chapter has illustrated how the qualitative findings from the evaluation study have played an important formative role in developing an alcohol education package for teachers.

CHAPTER 7

THE OUTCOME EVALUATION - ANALYSIS AND RESULTS

The aims and objectives of this evaluation study have been described in Chapter three. The fourth of these objectives, namely the identification of the patterns of use of alcohol, tobacco and illicit drugs within the study groups, has been addressed in Chapter four, where the results of the baseline survey were discussed. The primary objective of this study, however, was to assess the impact of the alcohol education initiative on the study group. The present chapter will concentrate on the analysis and results in relation to this outcome evaluation.

7.1 THE NULL HYPOTHESES

The overall research design has been described in Chapter three, and summarised in Figure 3.2. The effectiveness of the alcohol education package was assessed objectively by analysing changes between the pre- and post-intervention surveys in variables concerning knowledge, attitudes and behaviour about alcohol. For each of the key variables, two null hypotheses were set up:

i) that there is no difference between the control group (c) and the intervention groups (t1 and t2 combined)

ii) that there is no difference between the two intervention groups.

7.2 THE STATISTICAL ANALYSES

7.2.1 Rationale

The principal method used to test these null hypotheses was analysis of variance (ANOVA). The specific application used in this study could not be easily computed using the standard ANOVA procedures in

SCSS (Nie et al. 1980). Instead, a short computer programme was written in BASIC and the analysis run on a personal computer. As is standard practice in computer applications such as this, a hand-calculated example was used to check the logic of the computer programme. To assist understanding of the programme application and the examples of its output, a brief explanation of the statistical rationale is given in the rest of this section.

In a general sense, the F-statistic resulting from ANOVA is a ratio which compares the variance arising from an independent variable (the numerator) with the error variance (the denominator). When the value of F is statistically significant for a particular set of conditions, this permits the inference that the independent variable has had an effect on the results. In this way F-tests are used to test whether a null hypothesis can be accepted or rejected.

7.2.2 Specific Application to this study

In order to test the null hypotheses in the present study, analysis of variance was carried out using a three-by-three factorial model. This is illustrated in Table 7.1.

Table 7.1 Statistical Model For Outcome Evaluation

Experimental Group	Region r1	r2	r3	Totals
s0	School 2	School 4	School 8	S0
s1	School 3	School 5	School 7	S1
s2	School 1	School 6	School 9	S2
Totals	R1	R2	R3	T

For the purposes of this model, each experimental condition is referred to as a 'stream'. The control group (c in Figure 3.2) is stream 0 denoted by s0, the specialist intervention condition (t2 in Figure 3.2) becomes s1, and the non-specialist intervention (t1 in Figure 3.2) becomes s2. Each of the regions is identified, with r1 denoting Highland, r2 Berkshire and r3 Dyfed. The row totals for each stream are represented by

S0, S1 and S2.. The column totals for each region are represented by R1, R2 and R3. The unit of analysis is the individual school. Thus each cell in the grid of Table 7.1 represents one school in the study so that, for example, cell one will always contain the data for the control group school in region one. Using this model, ANOVA was used to test the main effects of region and experimental group against the interaction effect, as described below. In the BASIC programme, the first step in calculation of the F-statistic was to compute the sums of squares (SS).

For the variable 'region' the sums of squares,

$$SS_R = \frac{R1^2 + R2^2 + R3^2}{3} - \frac{(R1 + R2 + R3)^2}{9}$$

(d.f. =2)

For the 'stream' variable:

$$SS_S = \frac{S0^2 + S1^2 + S2^2}{3} - \frac{(S0 + S1 + S2)^2}{9}$$

(d.f. =2)

For the interaction effect:

$$SS_{RxS} = \frac{Sch1^2 + \ldots + Sch9^2}{9} - \frac{(Sch1 + \ldots + Sch9)^2}{9}$$

(d.f. =4)

The F-statistic is the ratio of mean squares for each effect.

Mean square for effect of region is SS_R / d.f.

for stream is SS_S / d.f.

and for interaction is SS_{RxS} / d.f.

The F statistic can then be calculated to identify the variance due to region, stream and interaction between these conditions, for any variable. In order to test the differences between experimental conditions, it was necessary to take this analysis one step further using a technique

known as orthogonal comparison (see Guilford and Fruchter 1978). This enabled the effect of experimental group (i.e. stream) to be split so that the difference between control group (S0) and combined intervention groups (S1 and S2) could be tested, as required for the first null hypothesis. In the same way it was possible to compare the variance attributable to each of the intervention conditions (S1 with S2) as required to test the second null hypothesis.

Most commonly, analysis of variance based on a factorial model as described above is used to compare means, with rejection of the null hypothesis when the variance between groups is significantly greater than that within groups. However, for some of the key variables in the present study, calculating the significance of mean differences in pre- and post-intervention data was not appropriate or meaningful. Such variables will be identified in the examples discussed in the next section. Statisitical advice sought by the author recommended an alternative procedure for computing the F-tests on these variables, using proportions of respondents as the basis of the analyses. In this procedure each cell in the 3x3 grid will contain a ratio instead of a single mean value. This ratio will be, for each school, the number of respondents who changed in the direction of interest to the number of respondents who changed in any direction, pre- and post-intervention. In order to comply more fully with the assumptions in ANOVA about normal distribution of data, the ratio in each cell was subjected to an arc-sine transformation before the F-statistic was calculated as before.

7.2.3 Limitations

One final point must be noted about the statistical method. As explained above, the unit of anlaysis was the individual school, as represented by each cell in the grid. The study was designed in this way for practical reasons, although it imposed restrictions on the sensitivity of the F-tests by limiting the degrees of freedom. It could be argued that by using a large number of pupils in a small number of schools, statistically significant F-values would only result from very large differences between the groups, and that it may have been preferable to use a smaller number of pupils in a larger number of schools. However, such statistical

considerations have to be offset against the cost and practical limitations of fieldwork in schools throughout a geographically widespread area.

7.3 RESULTS

As noted in Chapter four, other surveys of young people and alcohol would suggest that the 12 to 13 year olds in the present study would exhibit some change in their alcohol related knowledge, attitudes and behaviour between the two surveys merely as a result of growing older. In particular an increase in their experience of alcohol would be expected. However, if the alcohol education intervention had any measurable effect, there should be differences between the adolescents who received the education, and those in the study who had no alcohol education. The study had been designed to facilitate examination of any such differences and to relate these to the administration of the alcohol education programme.

Changes between baseline and follow-up surveys - a descriptive overview

The follow-up survey showed that overall the young people in the study group reported an increase in their experience of alcohol and its effects. They were becoming older, and such changes are consistent with the findings from other studies (Plant et al. 1985; Marsh et al. 1986). These changes included quantity of alcohol consumed on last occasion, experience of hangover and other examples which are illustrated below in Table 7.2.

Table 7.2 Experience of alcohol : Changes occuring pre- and post-intervention

Survey Question	Percentage of study group who responded 'YES' Pre-intervention survey	Post-intervention survey
Ever tasted an alcoholic drink	96	98
Drunk alcohol in last seven days	15	23
Ever had a hangover	20	33
>4 hangovers in last 6 months	1	4
Alcohol-induced stomach upset	27	29
Alcohol related accident/ injury	4	6
Maximum consumption of > 8 units of alcohol (4 pints of beer)	9	22

7.3.1 Changes in Alcohol Related Knowledge

a) Total Score on Knowledge Quiz

As noted in Chapter four, respondents' knowledge about alcohol was assessed by a quiz of 15 items, asking about such facts as the equivalent strengths of different alcoholic drinks. The mean score for knowledge items correct out of 15 was calculated for each school in the study. This figure increased for all schools, between baseline and follow-up surveys, and is illustrated for each experimental group in Table 7.3.1. below.

Table 7.3.1 Mean scores on knowledge quiz pre- and post-intervention

Group	Mean Score Correct Pre	Post	Change in Mean Score	% Increase
S2 (non specialist teachers)	6.7	8.3	+ 1.6	10.6
S1 (specialist teachers)	6.1	7.9	+ 1.8	12.0
S0 (control group)	6.4	7.4	+ 1.0	6.7

It is clear that the young people in the two groups receiving the alcohol education showed a slightly greater improvement than those in the control group. This suggests that the alcohol education may have contributed to the subsequent alcohol related knowledge of the intervention groups. Despite this difference, however, the real increase in knowledge was very small for all sub-groups.

The null hypotheses were tested, for mean difference in total knowledge scores, using the specially written BASIC programme as described in section 7.2. The value for each cell in the grid was obtained by computing the difference in mean number of items correct pre- and post-intervention, for each school. These are shown below in Table 7.3.2, for males and females combined, along with the output from the computer programme.

Table 7.3.2 Mean Differences In Knowledge (Total Correct)

	R1	R2	R3	Total
S0	0.85	0.59	1.80	3.24
S1	2.49	1.20	1.90	5.59
S2	2.21	1.16	1.45	4.82
	5.55	2.95	5.15	13.65

Main Effect - Region	1.30667
Main Effect - Stream	0.95687
Interaction Effect	0.92687
F-Test Region	2.81952
F-Test Stream	2.06472
F-Test Combined Intervention V Control	**3.70299**
F-Test Stream2 V Stream1	**0.42645**

The F-tests did not yield statistically significant values, and so neither of the null hypotheses can be rejected. The conclusion therefore has to be drawn that there were no statistically significant differences between the control and intervention groups in knowledge gain.

Similar analyses were conducted on the mean differences in knowledge items wrong, to examine the possibility of any negative impact of the educational intervention. Once again no statistically significant differences emerged between control and intervention groups, and the null hypotheses were accepted.

b) Individual Knowledge Items

Respondents' knowledge about alcohol was further examined. Comparisons were made on responses to individual items in the knowledge quiz. For each item, the ratio of 'positive changers' to 'all changers' was calculated. This ratio was the number of respondents who were wrong (or had ticked 'don't know') at the pre-intervention survey but were correct at post- intervention (i.e. 'positive changers') over the number of respondents who had changed in any direction. These proportions can be seen in Table 7.3.3a which illustrates the data for item (c) in the survey, the statement 'alcohol is a drug'.

Table 7.3.3a Proportional Differences in Responses to Knowledge Item c (Positive Changers Only)

	R1	R2	R3	Total
S0	46/ 74	45/ 88	28/ 50	1.80
S1	47/ 71	29/ 45	34/ 50	2.17
S2	42/ 59	34/ 49	45/ 57	2.47
	2.19	2.00	2.25	6.44

Main Effect - Region	0.01102
Main Effect - Stream	0.07444
Interaction Effect	0.01081
F-Test Region	2.03926
F-Test Stream	13.77107
F-Test Combined Intervention V Control	**22.08569**
F-Test Stream2 V Stream1	**5.45645**

The values in the totals columns result from summation of the transformed data in each cell. The F-tests on this data indicate that there was a significant difference between control and combined intervention group, with $F=22.08$, $p<0.025$, (d.f. = 1,4). There was no significant difference between the two intervention groups.

A second analysis was conducted for each knowledge item, with the ratio this time being the number of respondents who changed in any direction to the total number of respondents in each school. This was done to check whether there was any effect of the education on the propensity to change responses in either direction. The analysis for this data is also illustrated for quiz item c, as shown in Figure 7.3.3b.

Table 7.3.3b Proportional Differences in Responses to Knowledge Item c (All Changers)

	R1	R2	R3	Total
S0	74/150	88/214	50/127	1.34
S1	71/164	45/118	50/125	1.25
S2	59/185	49/168	57/ 87	1.33
	1.29	1.11	1.53	3.93

Main Effect - Region	0.02957
Main Effect - Stream	0.00178
Interaction Effect	0.08843
F-Test Region	0.66887
F-Test Stream	0.04028
F-Test Combined Intervention V Control	**0.02678**
F-Test Stream2 V Stream1	**0.05377**

The values of the F-tests resulting from this second analysis were too small to be of statistical significance. For quiz item c therefore, it was possible to reject the first null hypothesis, and conclude that the 'educated' respondents were more likely to improve on this aspect of their alcohol related knowledge. The second null hypothesis cannot be rejected, since there were no significant differences between the two intervention groups.

Using identical analytic procedures, F-tests were conducted for all individual items in the knowledge quiz. Those findings which were statistically significant are tabulated below. For each item in Table 7.4a it can be concluded that the educational intervention significantly increased the likelihood of a correct response.

Table 7.4a Knowledge items in which the intervention was effective

QUIZ ITEM	(Correct) (Response)	F-stat istic	Significance
Alcohol is a drug	(True)	22.08	$p<0.025$
Giving alcohol to accident victims can be dangerous	(True)	18.52	$p<0.05$
Alcohol harms less people in Britain than illegal drugs such as herion and cocaine	(False)	15.32	$p<0.05$
Eating along with drinking will slow down the effects of alcohol	(True)	8.62	$p<0.05$

c) The Problem Of Data Contamination

Examination of the raw data for the above analyses increasingly led to a suspicion that there may have been some contamination. For many of the knowledge items, there was a consistent tendency for the data from one particular control group school to resemble the intervention group data, rather than that for the other control group schools. Further investigations of this apparent anomaly indicated that local contamination was a distinct possibility. During the period of the present study, a separate health education initiative, part of the 'Heartbeat Wales' programme, was held concurrently, involving young people in schools and communities throughout Wales. The issues of tobacco and alcohol misuse were included in this programme (Nutbeam 1989), and it was confirmed that the Welsh control group school in the present study had participated in 'Heartbeat Wales'. In view of this, it was decided to re-analyse the data for knowledge about alcohol excluding the contaminated school and the two other schools in the Welsh region. The results of these re-analyses are discussed in the remainder of the current section.

i) Mean differences in total knowledge score excluding Welsh data.

The analyses described in relation to Table 7.3.2, for mean differences in total items correct, were repeated using data only for

Highland and Berkshire regions (r1 and r2). This re-analysis resulted in a significant difference, for males and females together, between control and combined intervention groups, with $F = 15.04$ ($p<0.05$; d.f. = 1,3). When sub-divided by gender, it was found that this difference was largely attributable to a knowledge gain amongst female respondents ($F = 37.87$, $p<0.01$, d.f. = 1,3). For males alone, the comparable results were $F=7.61$, $p<0.1$; d.f. = 1,3.

As for the complete data set, F-tests were also conducted on the mean difference in total items wrong, with the Welsh data excluded. No significant differences were found between control and intervention groups, for males and females combined or independently.

ii) Changed responses to individual knowledge items - excluding Welsh data

This entailed re-analysis of the data for each knowledge item, as illustrated in Tables 7.3.3 (a) and (b). In Table 7.4 (a) the results of these analyses identified the knowledge items on which the alcohol education had a positive impact for the entire study group. With the Welsh data excluded, two further items can be added:

Table 7.4b Additional Knowledge Items Influenced By the Intervention

QUIZ ITEM	(Correct) (Response)	F-Statistic	Significance
A single whisky (as measured in a pub) is stronger than a pint of beer.	False	22.59	$p<0.025$
The human body gets rid of two pints of beer in one hour	False	29.58	$p<0.025$

Summary

There is some indication that the data on alcohol related knowledge in this study was subject to local contamination. Without allowing for this, knowledge gain as a result of the intervention was found to be significant in four individual items, but not in the mean scores for all

items in the knowledge quiz. Taking account of the contamination, it can be concluded that the intervention had a significant impact on the mean improvement in total knowledge scores, as well as on two additional specific aspects of alcohol related knowledge.

7.3.2 Changes in Alcohol related attitudes

The attitudes of the study group towards alcohol use were measured using a set of twenty short statements about alcohol, reflecting a mixture of favourable and unfavourable attitudes. Respondents were asked to tick whether they agreed, disagreed or were not sure about each of these statements. The way in which this information was integrated into positive and negative attitudes 'scores' respectively has been described in Chapter four. Approval of alcohol consumption was taken to imply a positive attitude, while disapproval was taken to imply a negative attitude towards its use.

Table 7.5 illustrates the findings for alcohol related attitudes, broken down by experimental group. The percentages were derived from comparison of the pre- and post-intervention scores on each of the two attitude scales, and hence refer respectively to the proportion of respondents in each group who became more positive about alcohol use, those who became less positive and those who remained unchanged.

Table 7.5 Pre- and Post-intervention changes in attitude

	Control Group (S0)		Intervention Group 1 (S1)		Intervention Group 2 (S2)	
	Positive Score	Negative Score	Positive Score	Negative Score	Positive Score	Negative Score
%Increase	59.2	30.8	63.5	34.3	59.8	43.4
%Decrease	26.1	57.1	25.5	56.4	26.8	46.8
%Unchanged	14.7	12.0	11.0	9.3	13.4	9.8

Positive attitudes

It is clear that approximately 60 per cent of respondents in all three experimental groups exhibited an increase in positive attitudes, 25 per cent showed a decrease and 12 per cent remained unchanged. Few differences were apparent between control and intervention groups. F-tests were conducted on the difference in mean score for positive attitudes between pre- and post- intervention surveys. The values of these mean differences are illustrated below in the grid in Table 7.6. The F-tests indicate no statistically significant differences between control and combined intervention groups, or between the two intervention groups.

Table 7.6 Mean Differences In Positive Attitudes Score

	R1	R2	R3	Total
S0	1.68	1.56	1.24	4.48
S1	1.93	1.48	1.50	4.91
S2	2.10	1.91	0.97	4.98
	5.71	4.95	3.71	14.37

Main Effect - Region	0.67947
Main Effect - Stream	0.04887
Interaction Effect	0.28547
F-Test Region	4.76038
F-Test Stream	0.34236
F-Test Combined Intervention V Control	**0.67328**
F-Test Stream2 V Stream1	**0.01144**

Negative attitudes

The percentage changes noted in Table 7.5 suggest that the intervention group respondents were slightly more likely to increase their score for negative attitudes. This potential difference however was found not to be statistically significant when F-tests were conducted on the difference in mean scores, as illustrated in Table 7.7.

Table 7.7 Mean Differences In Negative Attitudes Score

	R1	R2	R3	Total
S0	2.01	0.55	1.66	4.22
S1	0.69	0.85	1.61	3.15
S2	1.59	-1.40	-0.15	0.04
	4.29	0.00	3.12	7.41

Main Effect - Region	3.27903
Main Effect - Stream	3.14165
Interaction Effect	2.87597
F-Test Region	2.28029
F-Test Stream	2.18475
F-Test Combined Intervention V Control	**2.12890**
F-Test Stream2 V Stream1	**2.24060**

Examination of the raw data for attitudes gave no indication that the 'Heartbeat Wales' initiative had had a local influence on data from the Welsh control group school. Re-analysis of the mean differences excluding all the Welsh data reinforced this perception, with results similar to those above emerging. None of the analyses conducted on the mean differences in the attitude data enabled rejection of either of the null hypotheses. The attitudinal measure in this study comprised two ten-item sets of responses, each reflecting respectively positive or negative attitudes to alcohol consumption. The quantitative measure referred to total scores on each of these response sets, rather than on individual items. It was not therefore deemed of value to quantify and examine change in individual items. It has to be concluded therefore, that the educational intervention had no significant impact on the alcohol related attitudes of the study group as measured by the sets of attitudinal statements in the survey questionnaire.

7.3.3 Changes in alcohol related behaviours

A wide range of behavioural measures was investigated, with the focus on quantities of alcohol consumed, frequency of consumption and experience of the effects of alcohol including hangovers, upset stomach and alcohol related injuries.

Quantity of Consumption

The respective amounts of beer, wine and spirits which respondents reported having consumed on the last drinking occasion were recorded in units of alcohol. For the complete study group, 41.3% increased their beer consumption and 38.1% increased their wine consumption. The overall consumption of spirits remained low, with only small changes pre- and post-intervention. The changes in consumption of beer and wine are illustrated in Table 7.8, broken down by experimental groups.

Table 7.8 Pre- and post-intervention differences in quantity of beer and wine drunk on last occasion

	Beer			Wine		
	*S0	S1	S2	S0	S1	S2
%Increase	40.7	43.2	40.0	41.1	35.1	38.0
%Decrease	34.2	34.9	39.3	38.3	44.2	41.1
%Unchanged	25.1	21.9	20.7	20.6	20.7	20.9

*(S0 = control group, S1 = intervention group 1, S2 = intervention group 2.)

As in Table 7.5, the percentages take no account of the magnitude of the change, but only the direction. Here they refer to the proportion of respondents in each group who respectively increased, decreased or did not alter the quantity of beer or wine drunk on the last occasion. To examine these group differences further, analysis of variance was carried out on the mean differences in quantity of each kind of alcohol consumed on the last occasion, based on units of alcohol.

Table 7.9a illustrates the results for beer, Table 7.9b for wine, and Table 7.9c for spirits.

Table 7.9a Mean Differences In Units Of Beer Consumed

	R1	R2	R3	Total
S0	0.61	0.32	0.36	1.29
S1	0.32	0.21	0.48	1.01
S2	0.49	0.19	0.09	0.77
	1.42	0.72	0.93	3.07

Main Effect - Region	0.08602
Main Effect - Stream	0.04516
Interaction Effect	0.08691
F-Test Region	1.97954
F-Test Stream	1.03911
F-Test Combined Intervention V Control	**1.63641**
F-Test Stream2 V Stream1	**0.44183**

Table 7.9b Mean Differences In Units Of Wine Consumed

	R1	R2	R3	Total
S0	0.27	0.36	0.33	0.96
S1	0.33	-0.07	-0.03	0.23
S2	0.37	0.20	0.31	0.88
	0.97	0.49	0.61	2.07

Main Effect - Region	0.04160
Main Effect - Stream	0.10687
Interaction Effect	0.07453
F-Test Region	1.11627
F-Test Stream	2.86761
F-Test Combined Intervention V Control	**1.95617**
F-Test Stream2 V Stream1	**3.77906**

Table 7.9c Mean Differences In Units Of Spirit Consumed

	R1	R2	R3	Total
S0	0.52	0.22	0.32	1.06
S1	0.41	0.39	0.19	0.99
S2	0.64	0.07	0.25	0.96
	1.57	0.68	0.76	3.01

Main Effect - Region	0.16162
Main Effect - Stream	0.00176
Interaction Effect	0.08444
F-Test Region	3.82789
F-Test Stream	0.04158
F-Test Combined Intervention V Control	**0.07605**
F-Test Stream2 V Stream1	**0.00711**

All three grids demonstrate a slight tendency for a larger increase in mean quantity consumed for control group schools. None of the F-tests produced significant values, and therefore both the null hypotheses were accepted. A further variable was computed to investigate mean differences in total alcohol consumption. This combined the units of beer, wine and spirits reported to have been drunk on the last occasion, to give a measure of total consumption irrespective of the kind of alcoholic drink. The mean differences were compared using analysis of variance as illustrated below.

Table 7.9d Mean Differences In Total Consumption

	R1	R2	R3	Total
S0	1.32	0.90	0.70	2.92
S1	0.85	0.42	0.70	1.97
S2	1.37	0.07	0.87	2.31
	3.54	1.39	2.27	7.20

Main Effect - Region	0.77887
Main Effect - Stream	0.15447
Interaction Effect	0.37667
F-Test Region	4.13558
F-Test Stream	0.82018
F-Test Combined Intervention V Control	**1.43575**
F-Test Stream2 V Stream1	**0.20460**

Although once again the mean increase was greater for the control group, the differences between control and intervention groups were not statistically significant.

One further variable had elicited information about quantity of alcohol consumption. Respondents had been asked to report the maximum quantity of alcohol they had ever consumed on one occasion. If the alcohol education had been effective, it could predictably have had a moderating effect on this variable, with a smaller increase in mean maximum consumption for the intervention groups. As before, analysis of variance was used to investigate these group differences, and the results are illustrated below.

Table 7.10 Mean Differences In Maximum Consumption

	R1	R2	R3	Total
S0	1.08	0.72	0.82	2.62
S1	0.95	0.52	0.76	2.23
S2	0.96	0.70	0.35	2.01
	2.99	1.94	1.93	6.86

Main Effect - Region	0.24736
Main Effect - Stream	0.06362
Interaction Effect	0.10198
F-Test Region	4.85118
F-Test Stream	1.24778
F-Test Combined Intervention V Control	**2.17913**
F-Test Stream2 V Stream1	**0.31641**

Once again the mean differences in each cell suggest a greater increase for the control group in maximum quantity consumed. This however was not statistically significant and both null hypotheses were accepted.

All the above analyses in relation to quantity of alcohol consumed were repeated on data for males and females independently. For one variable, there was a suggestion that acceptance or rejection of the null hypothesis may be biased by gender. In the variable measuring the total quantity of alcohol consumed on the last occasion for females $F = 7.11$; d.f. = 1,4; $p<0.1$. (The corresponding figures for males were $F = 0.28$; d.f. = 1,4; NS). Although the level of significance is not high, and does not

justify rejection of the null hypothesis, this has to be considered within the limitations of achieving statistical significance imposed by the study design.

Frequency of Consumption

Only one question provided data on self-reported frequency of consumption, asking respondents when they last had alcohol to drink. A variable was computed to identify an increase or decrease between times one and two in this recency of consumption.
These changes are illustrated in Table 7.11, broken down by stream.

Table 7.11 Pre- and post-intervention changes in frequency of consumption

	S0	S1	S2
% Increase	26.7	14.2	16.8
% Decrease	9.1	9.5	12.9
% Unchanged	64.2	76.3	70.3

This suggests that the vast majority of respondents in all three streams did not change their recency of consumption. Amongst these who did change, a higher percentage of respondents had increased this frequency measure than decreased it. Furthermore, these descriptive data suggest that in comparison to the intervention groups, the control group was more likely to report having drunk more recently at time two, and slightly less likely to have reduced this frequency.

These differences were examined more rigorously using ANOVAs as before on the proportions of respondents who changed. Firstly, for males and females combined, F-tests were computed for the proportion of these respondents who increased their recency to those who changed in either direction. ($F=1.01$; d.f. = 1,4; NS). In the same way, ANOVAs revealed no significant differences between streams for the proportion of respondents who reported less recent drinking ($F = 0.94$; d.f. = 1,4; NS). These data were broken down by sex and re-analysed, but no significant differences were revealed for either sex.

Consequences of Consumption

Respondents had been asked to answer twelve questions about their experience of alcohol related consequences. (See Q.28 on page 15 of the survey questionnaire - Appendix 2). Responses to these questions were summed to provide an index of consequences. The questions were dichotomous, and so the minimum possible score, indicating experience of all listed consequences was 12. The maximum score of 24 would suggest no experience of any of the listed consequences. The differences in mean scores on this index pre- and post-intervention were small, and are illustrated below. As this data would suggest, there were no significant differences between control and intervention groups.

Table 7.12 Mean Differences In Alcohol Related Consequences

	R1	R2	R3	Total
S0	1.29	0.26	1.44	2.99
S1	0.74	0.27	0.66	1.67
S2	0.91	0.99	0.36	2.26
	2.94	1.52	2.46	6.92

Main Effect - Region	0.34782
Main Effect - Stream	0.29149
Interaction Effect	0.83918
F-Test Region	0.82896
F-Test Stream	0.69470
F-Test Combined Intervention V Control	**1.11286**
F-Test Stream2 V Stream1	**0.27654**

The mean scores on the consequences index indicated limited experience for all respondents. (At pre-intervention $\overline{X}1 = 23.10$ s.d. = 1.37 and at post- intervention $\overline{X}2 = 22.33$ s.d. = 3.65). It was possible that the experimental groups could differ significantly at post-intervention on specific consequences even if these were limited in number. Individual items of the index were thus analysed separately to compare the proportion of respondents in each group whose experience changed pre- and post-intervention. As noted above, each response had two options - No (Never) or Yes (Ever). Change as measured at post-intervention is thus theoretically possible in only one direction - from 'Never' at time one to 'Yes' at time two. For each school, the number of respondents who

changed in this direction was noted, along with the number of 'invalid changers' (ie. those who responded 'Yes' at time one and 'Never' at time two). The ratio in each cell of the grid was the number of valid changers over the total number in that school minus the invalid changers. For many of the variables here the proportion of changers was too small to make analysis worthwhile. Two consequences where differences were of sufficient magnitude to merit further investigation were experience of alcohol related stomach upset ($F = 0.88$, d.f. = 1,4; NS) and experience of arguments with adults because of alcohol ($F = 1.63$, d.f. = 1,4; NS). As indicated neither gave significant results.

A separate question identical in response format to those 'consequences' variables described above asked respondents if they had ever had a hangover. Sub-divided by stream, the percentage who changed their response, from 'No - never' at time one to 'Yes' at time two were:

So (control group): 20.8%

S1 (intervention group 1): 18.1%

S2 (intervention group 2): 14.8%

Analysis of variance on this data, using the same procedure as for the other consequences variables, indicated that the difference between the control and intervention groups was not significant and rejection of the null hypothesis was not possible. ($F = 3.00$, d.f. = 1,4; NS). In the pre-intervention survey it had been noted that males were more likely than females to have experienced effects of alcohol consumption such as those referred to above. The above data were thus analysed separately for males and females. No significant differences emerged however, within sex groupings. Despite the trends identified in the descriptive data, the control group were not significantly more likely than the rest to have experienced the alcohol- related consequences included in the survey questionnaire. Nor were the differences between intervention groups of statistical significance.

Given the limited experience of these effects amongst all the study group, and the minimal changes between times one and two, there was no evidence of contamination of this data due to the 'Heartbeat Wales' project.

Re- analysis excluding the Welsh data would not therefore have been a productive exercise.

7.4 SUMMARY AND CONCLUSIONS

In Chapter three, it was noted that the education package had three principal aims:

- to improve knowledge about alcohol
- to discourage positive attitudes concerning alcohol
- to have a moderating effect on alcohol related behaviour

The findings described in this Chapter suggest that the educational intervention in this study had some impact on the target group of 12 to 13 year olds.

7.4.1 Knowledge about alcohol

This is the context in which the impact of the alcohol education was most apparent. When account was taken of the contamination of the Welsh data, the analyses indicated that the control group respondents knew less about alcohol on average than did the respondents in the intervention groups. Specific aspects of knowledge gained by the 'educated' respondents included the effects of alcohol on the body, and the relative strengths of spirits and beers. This latter finding reinforces the qualitative findings from pupil feedback discussed in Chapter six.

7.4.2 Attitudes towards alcohol

As already noted, the alcohol education intervention was intended to discourage positive attitudes about alcohol. This was measured by examining respondents' scores on positive and negative attitude scales respectively. There was however no evidence that exposure to the alcohol education had limited the development of positive attitudes concerning alcohol.

7.4.3 Behaviour in relation to alcohol

Quantity Consumed.

Consumption of spirits was low in both surveys, with only small changes evident pre- and post-intervention. For both beer and wine, approximately four fiths of all respondents (i.e. controls and intervention groups) changed their consumption. Forty-one per cent increased their beer consumption, while for 36% this decreased. For wine, the comparable figures were 38% (increased) and 41% (decreased).

The increase in mean consumption (measured in units of alcohol) for beer, wine and spirits respectively was compared. For each beverage the control group data showed a greater increase than either of the intervention groups. Despite this trend, the magnitude of these differences was insufficient to produce statistical significance. Similar results emerged for the total quantity consumed (beer + wine + spirits) on the last occasion.

For maximum quantity consumed (of any alcoholic drink) a similar pattern was evident with the raw data indicating a greater increase in mean number of units for the control group. Once again however, statistical significance was not found.

Frequency of consumption

Around 70% of respondents did not alter their self-reported recency of consumption pre- and post-intervention. Of those who did change, control group respondents appeared more likely to have increased their recency than the intervention groups and less likely to have reduced this. These differences were not statistically significant.

Consequences of consumption

Overall, the experience in the entire study group of adverse consequences of alcohol consumption was limited. An index of consequences was devised and differences in mean scores on this index pre- and post-intervention were compared. These differences were small and not significant.

Control group respondents were more likely than the rest to have experienced a hangover between the two surveys, although again this difference was not statisitically significant.

Gender differences

In some evaluation studies of health education in schools, males and females have been found to differ in their responsiveness to the educational intervention (Gillies 1986; Hansen et al. 1988). Few such differences emerged in the present study, with differential receptiveness apparent in only two of the outcome variables examined. Females made a significant contribution to the mean differences found between intervention and control group respondents in knowledge gained as a result of the intervention (excluding data from the contaminated region). The impact of the alcohol education also appeared to have been notably greater amongst females than males in relation to subsequent alcohol consumption as measured by changes in the self-reported quantity drunk on the last occasion. (It should be noted, however, that the female data was not statistically significant with $p<0.1$. This will be discussed in the next section).

Conclusions

In section 7.2.3 some limitations of the study design were noted. In particular, it was pointed out that because only a small number of individual schools were used, statistically significant findings (where $p<0.05$) only result from large differences between schools. The results of the present study indicate that for many of the key outcome variables, changes occurring between the pre- and post- intervention surveys were small. This was especially evident in the measures of alcohol related behaviours, where the incidence of specific behaviours was itself very low amongst the complete study group. In this context, measurements of change are themselves clearly going to be small.

In section 7.3 where detailed results of the outcome evaluation are presented, it became clear that several of the variables examined indicated a small but consistent trend suggesting that the intervention had had some impact. However only a limited number of these differences between

control and intervention groups were of sufficient magnitude to justify rejection of the null hypothesis set up to assess the impact of the alcohol education. Furthermore, it was possible to reject the second null hypothesis, set up to examine differences between the two modes of intervention, for only one outcome variable.

A statistically rigorous conclusion which can be drawn from the findings is that the alcohol education had a positive impact on the alcohol related knowledge of the study group. There is no evidence of any statistically significant impact on attitudes towards alcohol or on alcohol related behaviours. It was noted in Chapter two that some studies of drug education have shown that initiatives which focus on substance-based knowledge have resulted in increased subsequent use of that substance. In the present alcohol education evaluation, although the only significant impact was on knowledge there was no evidence to suggest that this was accompanied by a significant increase in frequency and/or quantity of consumption, or in resulting adverse consequences. Furthermore, in view of the statistical limitations imposed on this study by its methodological design, as noted in section 7.2.3, it would be imprudent to ignore those results which did not yield statisitical significance, In particular, the consistent pattern identified for the outcome variables in the context of alcohol related behaviour is one of moderation amongst the intervention groups in comparison to the controls. The conclusion stated at the start of this paragraph may therefore be enhanced by the more tentative statement that the alcohol education had a modest but consistently moderating impact (if not statisitically significant) on alcohol related behaviours.

CHAPTER 8

CONCLUSIONS AND IMPLICATIONS

8.1 OVERVIEW OF THE RESEARCH STUDY

The research project described in the preceding chapters had two principal aims.

1. To conduct a controlled evaluation of the effectiveness of one approach to educating young people about alcohol.
The evaluation methodology resulted in qualitative and quantitative data which were used to assess the effectiveness of an alcohol education package specially devised for the study.

2. To provide the teaching profession with an alcohol education package which was inexpensive, user-friendly, and which required minimal time for preparation and administration.
An earlier pilot study had indicated that unless these conditions were met, the alcohol education package would be of little practical value. These conditions imposed severe restrictions on the content and method of the alcohol education package. Nevertheless, as noted in Chapter five, the perceived needs of the potential consumers were regarded as an important consideration in developing the teaching materials.

In Chapters one and two, the theoretical background underlying the research was discussed, setting the present alcohol education initiative in the wider context of health education. Chapter one examined the multiplicity of factors which have been shown to be associated with levels of alcohol consumption in the general population. These were seen to include economic factors such as alcohol taxation policy or employment status of the consumer; social factors such as media images of alcohol, social expectations and peer group pressure; and individual factors such as personality traits.

Some theoretical explanations of substance use were considered as a precursor to discussing relevant models of health related behaviour.

Particular attention was given to theories which emphasise the rational decision making processes which are postulated to underlie or precede any specific health related behaviour. Fishbein's theory, which focuses on the relationship between health related attitudes, beliefs, behavioural intentions and actual (overt) behaviours, was compared to Becker's Health Belief Model stressing the cost-benefit analysis underlying decisions concerning the uptake of healthy behaviours. In the context of developing school-based alcohol education for adolescents, it was argued that the strengths of these theories and models were brought together in Tones' Health Action Model, which was adopted as the fundamental framework for this study.

Chapter two comprised a review of studies assessing the effectiveness of substance misuse education. This review was limited to school or college-based initiatives, covering alcohol, tobacco and/or illicit drugs. In both these chapters, some of the problems inherent in this kind of research were discussed. These ranged from practical issues, such as the validity and reliability of information obtained by questionnaire surveys of consumption of alcohol and other drugs, to the underlying assumptions and political implications of specific approaches to health education. The conclusions drawn from the literature review on the effectiveness of health, or more specifically substance use, education were generally pessimistic. However they highlighted the methodological difficulties of this kind of research, and the importance of incorporating rigorous evaluation in order to draw valid conclusions about programme effectiveness. Other points which emerged from the theoretical discussions had important implications for developing an alcohol education package for young people. Firstly, the target group must be clearly defined, and the objectives of the planned educational intervention carefully formulated in relation to the chosen target groups. These objectives must be realistic, with explicit acknowledgement of any apparent limitations. If the objectives are over ambitious and unrealistic, the likelihood of their being achieved is obviously reduced. Evidence was presented that providing information about alcohol would be unlikely on its own to have the desired impact on the consumption behaviour of young people. A more positive outcome would be predicted by incorporating this information into an approach to alcohol education which helps young people to develop a critical awareness of some of the external pressures on their alcohol related behaviour. The theoretical basis for this was discussed with particular reference to the

'social influences' approach to educating young people about alcohol, tobacco and illicit drugs.

Chapter three explained the research design for the present study, including the use of control schools and pre- and post-intervention measures. It also discussed the quasi-experimental approach necessitated by the practical constraints of conducting fieldwork in schools.

Chapter four discussed the findings from the baseline survey. This gave a pre-intervention measure of the alcohol related knowledge, attitudes and behaviour of the selected target group. The majority of young people in the study group had experienced few problems with alcohol. Nevertheless, a minority, disproportionately male, did report having had hangovers or alcohol related stomach upsets. Comparisons with national and international data reinforced the general pattern that few 12 to 13 year olds drink alcohol often, and when they do the amounts consumed are small. Longitudinal studies have suggested that occasional adventures with alcohol and intoxication become more frequent as adolescence progresses and as drinking moves out of the family setting into licensed premises and discos, with peers rather than parents as companions. This, however, was not seen as an argument for postponing alcohol education beyond the age group of 12 to 13 years, and the case for introducing alcohol education to younger children will be considered in Section 8.4.2.

As the descriptive data from the baseline survey indicated, the majority of 12 to 13 year olds in the present study had at least tried drinking alcohol; it is therefore a substance of which they already have some personal experience. Furthermore, as these young people enter adolescence, they are beginning to develop some of the social skills commonly associated with responsible and rational decision-making. These are already given general consideration in the social education curriculum in many schools and in the context of alcohol would include the self-confidence to question media messages and the ability to resist peer-group pressure. The target group selected for this study would therefore seem an appropriate age at which to begin the process of developing responsible use of alcohol.

In Chapter five, the development, piloting and implementation of the teaching package was described with reference to frameworks for

planning and implementation developed by health education practitioners. It was noted that one of the particular strengths of this study was the contribution made by the experienced social/health education teachers who were co-opted to the project to assist with package development. The research thus benefited from knowledge and experience of educational research, from a review of the available literature on evaluating the effectiveness of alcohol education, and from the experiental perspective of teachers.

The need to assess the education package had imposed severe limitations on the way in which it was implemented. As noted in Chapter five, this was particularly evident in the request made to teachers to adhere closely to the guidelines in the Manual for Teachers. This constraint gave participating schools little choice in how the alcohol education was administered, but was nevertheless essential to minimise the effect of individual teaching styles and related extraneous variables on the outcome of the study. The comments from teachers involved in the research indicated that they had accepted these constraints and experienced little difficulty in following the guidelines in the Manual.

The theoretical rationale underlying the teaching materials was explained, with particular reference to the role of Kelly's Personal Construct Psychology in the conceptual framework of the educational content and its emphasis on the individual as a 'meaning-maker'. The formative evaluation of the educational materials was discussed in terms of the piloting of these in schools in Lothian region. Details were given of specific changes to the package content recommended by this procedure.

8.2 QUALITATIVE RESULTS

This study was designed primarily as a quantitative outcome evaluation and it was to this end that research effort was invested. However, some qualitative evaluation was carried out, as described in detail in Chapter six. This reviewed the written reports from the specialist teachers, and the comments from two short semi-structured questionnaires completed respectively by teachers and pupils who participated in the alcohol education.

8.2.1 Summary of Findings

The principal findings from teachers suggested that the package was favourably received, and was perceived by a majority to fill a serious gap in the curriculum. More than half the teachers said they would continue to use the package after the research investigation was completed. On the negative side teachers were unanimously critical of the poor quality of the physical presentation of the resource material in the package evaluated. There was also a demand for greater flexibility and for the optional inclusion of video as additional stimulus material.

The qualitative data from pupils also indicated a generally favourable reaction to the alcohol education. Despite the weakness inherent in this type of data, it is interesting to note that there was some parallel between the pupils' responses on their 'Feedback Forms', and their responses in the survey questionnaire. For instance, in the former, pupils were asked to write down anything they thought they had learned from the alcohol education package. A large proportion responded by referring to the equivalent strengths of different alcoholic drinks, suggesting this was an area of interest to them. In the quantitative data from the questionnaire survey, this was one of the aspects of alcohol related knowledge which was assimilated by the young people who were exposed to the alcohol education.

8.2.2 Discussion

The supplementary collection of qualitative data from participants in the educational intervention was a crude exercise, and hence of limited value. The administration of the questionnaires was not controlled by the researcher, completion being dependent on the goodwill of participants. The rate of return from each education authority varied, and was not representative of the total population of teachers and pupils who participated in the study. Despite these methodological flaws, some merit was perceived in acquiring this kind of data, with full acknowledgement of its limitations, as opposed to having no feedback whatsoever. The interpretation of these qualitative results indicates a congruity of responses which can be taken as useful indicators of participants' first reactions to the education package. The criticisms concerning visual presentation have since been tackled with professional publication of the pack. The negative

comments concerning flexibility and additional stimulus material were not regarded as problematical beyond the research implementation. The prescriptive approach to using the alcohol education package demanded by the research design did not reflect normal classroom practice in the teaching of social/health education.

However, implementation is an important issue, especially in the context of future utilisation of the alcohol education. Although the package was designed as a free-standing module with a continuous theme, the objectives and suggested guidelines for teaching individual activities were self-contained. This was intended to facilitate implementation for future users who may wish to select activities from the package without completing it in its entirety, or to integrate it into a pre-existing social/health education programme.

8.3 QUANTITATIVE RESULTS

The fundamental issue of the study, relating to the effectiveness of the intervention, was discussed in Chapter seven in which the quantitative results of the outcome evaluation were presented.

8.3.1 Summary of Findings

The principal findings of this study are noted below subdivided into the three separate contexts in which the null hypotheses were tested.

a) **Knowledge**

The major finding was that the young people exposed to the alcohol education showed a significantly greater increase than the control group in their knowledge about alcohol. On the basis of this it was possible to reject the first null hypothesis. There were no significant differences in knowledge gain between the two intervention sub-groups, and thus the second null hypothesis could not be rejected.

b) **Attitudes**

The principal finding in relation to attitudes towards alcohol was that there were no significant differences in attitude changes between control and intervention groups, or between the two intervention sub-groups. Both null hypotheses were thus accepted.

c) **Behaviour**

No significant differences were found between control and intervention groups, or between the intervention sub-groups, on a range of variables relating to alcohol consumption behaviour. This made it impossible to reject either of the null hypotheses. Despite the absence of statistical significance, however, a consistent pattern was apparent. In analyses examining only the direction of change, it was evident that a larger proportion of respondents in the control group had increased the recency of their drinking, the quantity of beer and wine drunk on the last occasion and the maximum quantity of alcohol consumed on a single occasion. In analyses which also took account of the magnitude of these changes, a similar pattern emerged. For these same variables, the greatest increase in mean differences occurred in the control group. Although this pattern was not evident for scores on the index of alcohol related consequences, the control group demonstrated the greatest increase in experience of a hangover.

8.3.2 Discussion

In Chapter seven an explanation was given of how the design of this study, limited by practical constraints, had failed to maximise the possibility of identifying statistically significant findings and thus of rejecting the null hypotheses. If the study were to be replicated, it would be worthwhile planning at the outset to increase the number of individual schools in order to facilitate rejection of the null hypotheses. Against this however must be offset the additional costs which would be involved, and the possibility of introducing additional extraneous variables.

A second problem arising in the present study was the relatively low level of self-reported alcohol misuse amongst the study group as a whole, at both times one and two. The principal results of this research were based on analyses which examined change in responses between baseline and follow-up measures. Comparing the extent of such change between control and intervention groups therefore meant comparing very small values, hence adding to the difficulty of detecting between-group differences.

In the light of these limitations, it was concluded that while not statistically significant, there is some evidence that the package had a small but moderating impact on the alcohol related behaviour of the intervention groups. An alternative explanation, however, must be considered for the consistent pattern apparent in these data. It could be argued that the intervention group respondents under-reported on these behaviour variables at time two, because of a social desirability effect resulting from exposure to the alcohol education. This would result in responses which reflect judgements about what is acceptable to the researcher, rather than a real difference between the groups in actual behaviours. This would still suggest that the intervention had had some impact, albeit not in terms of achieving the stated aims. It is only possible to speculate from these data whether such an impact would ultimately be translated to overt behaviours. The issue of under- and over-reporting was addressed in Chapter three, and is one which this study was incapable of resolving. However, it could also be argued that any impact the package had on social desirability of responses would be equally apparent in the attitudinal measures. As noted above, no such effect was evident.

In the review of programme effectiveness in Chapter two, it was noted that there is evidence from some studies that educational initiatives which provide only information about a psychoactive substance may result in a subsequent increase in the use of that substance. This could have important implications for the major finding of this study concerning the significant impact of the package on alcohol related knowledge. There is however no evidence that the intervention groups were more likely than controls to have increased their alcohol use. On the contrary, the opposite was concluded.

For almost all variables examined, the null hypothesis comparing the specialist and 'naive' intervention groups was accepted, indicating that no systematic differences could be attributed to the style of intervention. This finding has implications for future implementation of the alcohol education pack, in that it may be concluded that in-service training would not be likely to benefit the effectiveness of the package in comparison to teaching it 'off-the-shelf'. This interpretation however must be made with caution, since the specialist intervention condition was a hypothetical simulation of inservice training, based primarily on prior familiarity with the content and process of the resource. In-service training can take a variety of forms, and any rigid recommendations about the benefits or otherwise of this would have to be based on a more rigorous examination of the issue. Within the protocol of the present study however, it can be concluded that the package had achieved its aim of providing teachers with an alcohol education package which was not dependent on in-service training. More generally, these results have some implications for implementation of alcohol education. The package in this study was taught by teachers of personal and social education or guidance, as part of that curriculum. It is thus recommended that such staffing is appropriate, especially given the experience of small group work and open-ended discussion which teachers in this field already have.

Throughout this investigation emphasis was placed on the importance of adopting a pragmatic perspective in school-based educational research. This was incorporated into the fieldwork protocol, where a quasi-experimental design was adopted, as illustrated by non-random selection of participating schools, and non-random allocation of schools to control and intervention groups. Pragmatism was also the basis of the objective of the research concerning the provision of an alcohol education package which satisfied some of the criteria articulated by educationalists in the earlier feasibility study.

These considerations resulted in an alcohol education programme which was intentionally designed as a minimal intervention. It is unrealistic to expect large changes in the knowledge, attitudes and behaviour of the target group as a result of four hours of teaching spread over several weeks. It is therefore encouraging to be able to conclude that unlike some previous drug and alcohol education programmes, the

intervention in this study had a modest but beneficial impact on the selected target group, with no evidence that it had been counterproductive. For reasons already identified, the design of this study limits the extent to which the results can be generalised. Nevertheless, it serves to reinforce the evidence of other recent research which suggests that the way forward for successful alcohol education lies in an approach which acknowledges the role of social influences.

In summary, the quantitative findings indicate that the short-term objectives of the educational intervention concerning the shift in alcohol related knowledge, attitudes and behaviour were achieved for knowledge and behaviour, but not for attitudes. Whether or not the longer-term aim of reducing misuse of alcohol was achieved cannot be judged from the findings of this study. An objective assessment of this outcome would require a follow-up survey of the cohort several years after the original post-intervention survey.

8.4 IMPLICATIONS AND RECOMMENDATIONS

8.4.1 Some Theoretical Considerations

The principal focus of this research as an evaluation study precluded the opportunity to investigate competing theories of health related behaviour in any systematic way. More specifically, it was never the intention of this project to asses the validity of the relationships between knowledge, attitudes, beliefs and behaviours as postulated in Fishbein's theory of reasoned action, Becker's Health Belief Model or Tones' Health Action Model. Nevertheless, the findings of this research pose some interesting questions about these relationships, especially concerning attitudes, and suggest a need for further investigation. In Chapter one, the discussion on theories of health related behaviours noted the role of behavioural intentions as a mediator between attitudes and overt behaviour. No attempt was made in the present research to include any explicit measures of behavioural intentions, but this could be a fruitful topic to pursue. Given the limited experience of alcohol consumption in the study group, and thus the limited quantifiable difference in behavioural measures between control and intervention groups, it may have been more

productive to use behavioural intention as the outcome variable. However, in order to investigate Fishbein's theory in this context, the need for event-specific data, emphasising single behavioural intentions in particular contexts, would have imposed severe restrictions on the nature of the intervention.

As already noted in this section, the breadth and design of this research did not enable precise conclusions to be drawn about some of the relationships between specific variables. In the context of the intervention, it was not possible to establish which particular aspects of the alcohol education programme had contributed to its effectiveness.

In Chapter five the theoretical basis of the content and process of the intervention was explained in terms of Kelly's Personal Construct Psychology. Although this was a generalised application of Kelly's theory, the positive outcome of the study suggests it was an appropriate educational rationale. Further investigation of this would entail a systematic comparison of a Kellian-based approach and an alternative, such as a teacher-centred and more didactic approach. The application of Personal Construct Psychology to health education could be extended by the use of the Reportory Grid Technique with students in the proposed target group, to elicit their personal constructs on 'healthy living'. These data could then be used as a foundation for subsequent student-centred activities to promote healthy behaviours, ensuring relevance of content to the target group.

In Chapter one the relevance of Tones' Health Action Model to this evaluation study was discussed. One of the major strengths of this model, which was given explicit consideration in developing the educational intervention, was its recognition of factors which act as barriers to healthy behaviour, as well as those which facilitate it. In the education package, the factors intended to facilitate responsible use of alcohol included increased knowledge about alcohol and its effects. Potential barriers to responsible use focused on social influences on alcohol consumption, especially peer group pressure, media images and parental attitudes. Following the recommendations of both Tones' HAM and Kelly's Personal Construct Psychology, the educational approach to enhancing or overcoming these factors involved making pupils more aware of what was

previously unconscious, largely by encouraging exploration of their own perceptions and those of others. The outcome of the study suggests that this approach had been successful, although once again a more narrowly focused investigation would be required to establish systematically the role of such factors and how they can be enhanced or overcome.

The second major strength of the HAM was seen to lie in its clarification of the role of feedback. This has limited application to the outcome of the present study, since it is primarily a post-decisional aspect of the system which contributes to the maintenance or otherwise of the chosen health action. A longer-term follow up study would be required to investigate the specific contribution of feedback.

8.4.2 Extended Applications

The educational rationale of the package in this study, and the open-ended nature of much of the content, imply some general applicability among young people. On the other hand, the theories of health related behaviour discussed in Chapter one highlighted the context specific nature of the postulated relationship between knowledge, attitudes, beliefs and behaviour. Translating this to the development of a health education initiative requires targeting a specific group in relation to a specific health related behaviour.

In the present study, the educational intervention had some impact on the target group of 12 to 13 year olds. It cannot be assumed, however, that the outcome would be identical with a different target group, since the materials were devised specially for the selected population. Survey data referred to in this thesis has illustrated the limited experience of alcohol consumption amongst the under-10s, thus highlighting the inappropriateness for this age group of alcohol education which assumes such experience. This younger population, however, are familiar with a range of images of alcohol (Davies and Stacey 1972; Aitken et al. 1988), and hence an alcohol focused component in a health education initiative would not be inappropriate. Evaluation of such an intervention would require behavioural intentions as an outcome measure rather than overt behaviours in relation to alcohol. For an older target group than that used in this

research, extensions to the package content would include stimulus material of greater relevance, for example on drinking and driving.

The important point is that this research, while using a specially devised compilation of resource materials, evaluated one particular *approach* to educating young people about alcohol. It is this approach which can be extended to educate different target groups about alcohol.

Furthermore the procedures used in this research paralleled those shown to be effective in tobacco education for young people, as described in Chapter two. Given the differing aims in these two contexts, with tobacco education intended to prevent uptake and alcohol education intended to minimise risk, the positive outcomes for both contexts must have useful implications for future initiatives.

8.4.3 Future Directions for Alcohol Education

Others have examined the role of alcohol education in a wider context. Howe (1989) argued that it should form an integral part of the work of all health and welfare professionals while Hayter (1989) noted that it suffers from inadequate funding, and from the failure of professionals to recognise its importance in education and training.

In order to highlight the wider implications of studies such as the present one, this section will give some consideration to the future prospects for alcohol education in Britain. This will include a brief review of the experiences of others, including countries outside the United Kingdom. The intention is not to provide a representative or comprehensive selection of alcohol education programmes from around the world, but to provide some comparative information which can act as a stimulus to recommendations for improvements and/or alternative strategies within the existing situation in the United Kingdom. While focusing on school-based alcohol education, attention will be given whenever possible to the links between school and community which facilitate reinforcement of the health related objectives.

In North America, school curricula have given a prominent position to education about drug use for more than a century. Most recently this has included initiatives which address together the use of alcohol, tobacco

and illicit drugs (Goodstadt 1986). Examples of local collaboration between schools and communities can be cited (Office for Substance Abuse Prevention 1989), but such liaison appears to be random rather than routine.

Information from Canada suggests that most Boards of Education throughout the nation appreciate the importance of committing curriculum time to education about alcohol and other drugs. In the province of Ontario, for example, the Ministry of Education sets out curriculum guidelines that require health and physical education programmes to include some focus on alcohol, tobacco and other drugs, beginning at nine years of age. Various attractively produced resources are available to assist teachers in implementing these guidelines. Examples of these include 'Your Health and Alcohol' (Ontario Ministry of Health 1980), for students aged 13 to 17, and 'Positive Life Using Skills' (PLUS) (Burden 1987), targeted at an age range of 9 years (PLUS I) to 17 years (PLUS II). These programmes emphasise the acquisition of life-skills and decision making skills, and include explicit information about alcohol. The PLUS II programme covers all psychoactive substances, including prescription drugs. In both packages pupil participation is encouraged, and the materials comprise explanatory notes for teachers and activity/discussion worksheets for pupils. The PLUS programme has as one of its aims the promotion of non-use as a viable alternative. This is reinforced by the provision of weekend 'retreats' for young people intended to strengthen the belief that a good time can be had without the aid of alcohol or other drugs.

Also in Canada, the Alberta Alcohol and Drug Abuse Commission launched in 1981 a programme for 12 to 17 year olds which focused on general issues of teenage development and adult support rather than specifically on alcohol. This programme integrated school, family and mass media participation including a bi-monthly magazine for adolescents, mailed to their home address. The principal objectives of the campaign were to delay onset of use and reduce misuse of alcohol, tobacco and illicit drugs. Comparison of survey data with a control province (Manitoba) has been taken as an indication that the campaign had achieved its objectives in relation to alcohol. (Thomson et al. 1987).

In Italy, Monarca (1988) noted that few efforts are geared towards preventive measures, despite the fact that World Health Organization statistics place it among the countries of higher alcohol consumption. Alcohol is inexpensive, readily available and heavily promoted. In 1987, the national mass media were actively involved in a campaign to promote wine consumption, using the motto 'Wine is drinking with the heart'. There are no information and/or education campaigns focusing on harm minimisation at national level. A small number of school-based and community based programmes exist at local level, but these are not in any way co-ordinated. One school-based programme for 10 to 12 year olds was developed at the University of Perugia in northern Italy, where a booklet of information about alcohol with appropriate references was produced for teachers. This focused on factual information about alcohol and its effects, particularly on the physiological consequences of chronic and heavy drinking. The main emphasis is on the dangers of drinking alcohol and on responses to alcohol related problems. Teachers are expected to produce their own resource materials based on suggestions in the book.

The Italian example contrasts sharply with that from Canada described above. The latter emphasised personal and social development, while the Italian example adopts a factual/biological model of alcohol use and concentrates on the long-term problems associated with misuse.

Spain, unlike Italy, does operate restrictive measures to regulate and control mass media advertising of alcohol. In 1988, new legislation in some regions banned the advertising of alcohol and tobacco in public places, including sports stadia, railway stations and airports. At a national level, collaboration between the Ministries of Health and Education resulted in a range of resources for health educators. These include books, leaflets and slides intended for use by family doctors, school teachers and social organisations. Although there is no nationally implemented alcohol education programme for schools, some of the autonomous communities in Spain do have their own alcohol and drug prevention programmes for young people. None of these, however, has been subjected to systematic evaluation.

In the Irish Republic, a post primary school programme was developed to assist teachers with the implementation of alcohol education

in their schools. These resource materials (Health Education Bureau 1982) emphasise the development of responsible decision-making skills and provide accurate information about alcohol. Although this resource is intended for use in schools, its overall goal of primary prevention is equally applicable to the wider context of family and community agencies.

In Scandinavia, concern about alcohol misuse is reflected by the existence of State Alcohol Monopolies which operate strict controls on the availability of alcohol. These differ in the individual Scandinavian countries, and the example discussed here will be restricted to the Alcohol Retailing Monopoly in Sweden - Systembolaget. This company regulates the availability of alcohol and at the same time provides alcohol information/education. Advertising of alcoholic beverages is permitted only at points of sale, and is thus restricted to restaurants and to the Monopoly beverage stores. The Monopoly also operates a Consumer Information Programme which aims to stimulate moderation through increased knowledge of alcohol and its effects (Swedish Alcohol Retailing Monopoly 1989).

In Sweden the age limit for the purchase of alcohol in Monopoly Stores is twenty years, and alcohol consumption by young people is a major concern of the State Monopoly. In addition to its internal activities, Systembolaget collaborates with the Swedish mass media to provide information targeted at specific groups. For instance special campaigns such as 'DON'T BUY ALCOHOL FOR YOUNG PEOPLE' have been run to coincide with annual youth celebrations such as graduation at the end of the school year. Such broad-based campaigns are difficult to evaluate; it is nevertheless interesting to note that a campaign discouraging alcohol consumption in combination with boating was followed by a decrease in the number of alcohol related-accidents at sea (Hibbel 1988). Caution, however, must be exercised in attributing causality to an association such as this.

In addition to the countrywide activities of Systembolaget, alcohol education for young people is an integral part of the compulsory health education curriculum in Swedish schools. The Swedish National Board of Education aims to give all teachers access to standard 'service materials' which can be fitted into the centrally defined syllabus across a variety of

subjects in response to local needs. Education about alcohol and/or other drugs focuses on improving knowledge, conditioning attitudes and changing behaviours.

These selected examples of alcohol education from countries outside the United Kingdom serve to illustrate that there is a wide diversity of approaches and commitment to alcohol education for young people. Some of the more extreme differences are doubtless rooted in the historical and cultural traditions unique to a particular nation. For instance in the Scandinavian countries, the temperance movement has a long tradition of playing a significant role in national policy and public attitudes to alcohol consumption. In this context, severe restrictions on availability and campaigns to moderate consumption are more acceptable to society as a whole. By contrast, in Italy the grape harvest and wine industry play a significant role in the national economy. For this reason, campaigns to reduce problems associated with alcohol misuse, either by restricting availability or by encouraging a reduction in demand, are less widely acceptable. Social differences of this nature must ultimately have some influence on the commitment to and provision of alcohol education in these nations, particularly at a centralised or national level. When considering alcohol education for young people, this is particularly evident in schools.

More specific differences which emerged from the examples above relate to the underlying assumptions and overall objectives of the respective education programmes, which in turn reflect different models of health related behaviour. In the examples quoted from Canada, it was clear that even within the same province, two of the packages widely available to teachers, while utilising a similar educational rationale, differed in their ultimate goal. The PLUS programme promotes non-use, while the Ministry of Ontario programme has an ultimate goal of increasing responsible use of alcohol by young people.

In Italy the school-based education package discussed is medical/biological in its approach, and focuses on the physiological harm associated with long term use of psychoactive drugs. Given this factual/information-giving approach the materials covered a range of

substances, legal and illegal. No consideration is evident of the role of individual motivation, beliefs or skills in this package.

In Sweden, although school-based education about alcohol and other drugs is an essential part of the general health education curriculum, the onus appears to lie ultimately with individual schools to devise their own alcohol education programme. On the other hand, school-based initiatives about alcohol which promote responsible use are readily reinforced by the activities of national organisations, often in conjunction with the mass media, hence increasing the likelihood of consistency between cultural and individual belief systems.

In summary, it is clear that a wide range of approaches to and objectives for alcohol education is to be found. Some educational interventions promote responsible use of alcohol, others have an ultimate goal of non-use. Some cover only alcohol, others refer to alcohol, tobacco and other drugs. In some countries school-based alcohol education is a centralised provision, and is reinforced by local and national initiatives. More commonly what actually happens in schools is dependent on local or individual enthusiasm, resulting in diverse provision with little evidence of structured or widespread continuity. Most importantly few initiatives have been subjected to any rigorous assessment of their effectiveness, making it impossible to identify conclusively the benefits of any particular school/community liaison.

Schools in Britain are seldom willing or able to allocate much time in the curriculum to alcohol education. Nevertheless, the kind of teaching package resulting from this study should be regarded as a 'starter'. The concept of responsible use of alcohol should be developed and reinforced throughout the remainder of compulsory education, and ideally carried on into higher or further education and the workplace. As noted above, a case can also be made for introducing alcohol education into the primary school. Central co-ordination of such provision across the entire compulsory education sector would ensure the establishment of structured continuity. Extension of alcohol education to the workplace would then seem a natural progression, with the target population already exposed to the concept of responsible use. Co-ordination at this level would require liaison between different government departments, but as illustrated in section 8.4.3 with

reference to Spain, the necessary co-operation should not pose an insurmountable hurdle.

Chapter one identified the wide range of influences on alcohol consumption, consequently implying that it is unrealistic and unfair to expect the educational system, at whatever level, to take on single-handed the task of combating the misuse of alcohol amongst young people. At the beginning of this thesis, the recommendations of various Government reports on young people and alcohol were noted. In addition to increasing the provision of school-based alcohol education, these reports acknowledged the need to reinforce any such initiatives outside the school setting. In this context the facilitating factors and feedback of the HAM can be seen to play an important role, going beyond the route of educational input.

While alcohol education can provide a stimulus to the uptake of healthy behaviours, the practice of responsible consumption will arguably be more widespread in an environment which makes such behavioural choices easier for the individual. The importance of securing parental support and active parental involvement in school-based alcohol education has already been identified. In addition, parents themselves could benefit from alcohol education both in terms of their own health related behaviour, and of facilitating responsible use in their children.

Community action also has an influential role in helping to combat the misuse of alcohol among young people, for example in the organisation of local campaigns to provide alcohol-free activities, such as discos, for under-age drinkers. An example of community action amongst parents in the U.S.A. was recently quoted (Leavy 1990), in which parents of teenagers have organised a local communication network for monitoring the parties or discos which their offspring wish to attend. Parents make appropriate contacts to confirm that adults will be present at the venue, and that the availability of alcohol will be monitored. In this way the young people are protected from exposure to social influences encouraging them to drink alcohol (especially peer group pressure) thus making responsible use an easier option.

At the level of society as a whole legal restrictions on the availability, promotion and consumption of alcoholic beverages already

exist. There is, however, some evidence to suggest that such restrictions need to be more rigorously enforced. For example a national survey of 14-16 year olds in England indicated that under-age purchase of alcoholic beverages is widespread (Plant et al. 1991). Similarly, a review of international policies on drinking and driving concluded that alcohol related road traffic accidents could be reduced by more rigorous legal procedures, particularly the introduction of random breath testing (Peacock, in press). More positively, the relatively recent introduction of low alcohol beers and wines in licensed premises can be viewed as an environmental facilitator for responsible use of alcohol. The ready availability makes it easier for individuals wishing to moderate their alcohol consumption to adopt this chosen behaviour. Furthermore, and arguably more importantly for young drinkers, low alcohol beverages can be consumed without risking loss of approval among peers by visibly abstaining. The feedback to the individual resulting from such behaviour should reinforce the appropriateness and ease of this chosen health related behaviour.

8.4.4 Summary and Conclusions

In Section 8.4.3 examples were given of how some countries outside the United Kingdom have approached the task of educating young people about alcohol. These reinforced one of the principal points of this thesis concerning the widespread need for systematic evaluation of alcohol education initiatives. As a result it is impossible to draw any firm conclusions about future directions, or to make specific recommendations about co-ordinated activity between family, school and community. Further research is required before these issues can be resolved. Nevertheless, the theoretical model of health related behaviour employed in this study, and re-iterated briefly in section 8.4.1, implies that alcohol education, especially in a school setting, has an increased chance of success if linked to parallel initiatives outside the formal education sector. It is, however, beyond the scope of this thesis to specify the nature of these links, other than to recommend national provision of compulsory alcohol education which has as its principal objective behavioural outcomes whose uptake can be facilitated by social environmental factors. The important contribution of the controlled evaluation study discussed here is the provision of objective recommendations, based on the proven effectiveness of one approach, concerning the nature of school-based alcohol education.

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APPENDIX 1. Letter to Parents

ALCOHOL RESEARCH GROUP

UNIVERSITY DEPARTMENT OF PSYCHIATRY
(ROYAL EDINBURGH HOSPITAL)
MORNINGSIDE PARK
EDINBURGH.
EH10 5HF

TELEPHONE No. 031-447 2011

November, 1986

Dear Parent,

The Alcohol Research Group at Edinburgh University are carrying out a three year research project to evaluate alcohol education in schools.

With the permission of Head Teachers, we have selected a sample of schools in three regions of Britain to help with our research. As part of this study, your child will be asked to fill in a short questionnaire on two separate occasions. The first time will be this term and the second eighteen months later. Our interest lies in the general knowledge and attitudes about alcohol expressed by large numbers of children; no information about any individual pupil will be disclosed.

The findings of this study may be important for future health education programmes in schools, and we hope you will have no objections to your child taking part. If, however, you would prefer that he/she should not answer the questionnaire, please complete the tear-off slip below and return it to the Head Teacher. Should you wish further information please contact the school.

Yours sincerely,

Gellisse Bagnall

Gellisse Bagnall
Research Fellow

I do not wish* . . . . . to take part in the alcohol education study.

Date . . . . . Signature of . . . . . Parent or Guardian

* Please print the full name of your child.

APPENDIX 2a. Survey Questionnaire
English language version

Confidential

ALCOHOL EDUCATION

INITIAL QUESTIONNAIRE

Autumn 1985

Alcohol Research Group
University of Edinburgh

For Office Use Only

Card 1

Respondent Code	1 - 2 - 3 - 4	[ ] [ ] [ ] [ ]
School Code	5 - 6	[ ] [ ]
Stream Code	7	[ ]
Card 1	8	[1]

This questionnaire is part of a study of what young people like yourselves know and think about alcohol. Once you have filled in your answers, we will take the questionnaires away with us, so none of your class-mates or your teachers will see what you have written. The only reason we ask for your name and address is so that we can ask for your help again in eighteen months' time.

Now we would like you to try and work through the questions on your own. This is not a test or an examination - we just want to know what you really think. Very few of the questions have a right or wrong answer, so please just try to be as honest as you can.

Please PRINT your full name clearly below :

Family Name _____ First Names _____

Please PRINT your full home address :

_____

_____

_____

What is your date of birth?
(Write in)
For example:

7	Aug	1973
Date	Month	Year

		19
Date	Month	Year

What is the name of your school? _____
(Write in)

Class: _____

Col. 9

Q. 1. Please indicate whether you are male or female: (tick one)

Male		1
Female		2

Col.10

Q. 2. In which country were you born? (tick one)

Scotland		1
England		2
Wales		3
Northern Ireland		4
Irish Republic		5
Elsewhere		6

Col.11

Q. 3. With whom do you live? (tick one)

Mother and father		1
Mother and step-father		2
Father and step-mother		3
Mother only		4
Father only		5
Grandparents		6
Other (specify)		7

Q. 4.

(a) What sort of work does your father/ step-father usually do? Write in a few words below to describe this work clearly.

Col.12
1
2

_____

_____

_____ .

(b) Is your father/step-father working or unemployed at present? (tick one)

Working	
Unemployed	

Col.13
1
2

Q. 5.

(a) Does your mother/step-mother have a job outside the home? (tick one)

Yes	
No	

Col.14
1
2

(b) Answer only if she has a job
What sort of work does she usually do? Write in a few words below to describe this work clearly.

Col.15
1
2

_____

_____

_____

Q. 6. Does your father/step-father ever drink alcohol, even just occasionally? (tick one)

Yes	
No	

Col.16
1
2

Q. 7. Does your mother/step-mother ever drink alcohol, even just occasionally? (tick one)

Yes		Col.17 1
No		2

Q. 8. Would your father/step-father mind if you drank alcohol? (tick one)

Yes		Col.18 1
No		2
Don't know		3

Q. 9. Would your mother/step mother mind if you drank alcohol? (tick one)

Yes		Col.19 1
No		2
Don't know		3

Q.10. Has your father/step-father ever offered you a drink? (tick one)

Yes		Col.20 1
No		2

Q.11. Has your mother/step-mother ever offered you a drink? (tick one)

Yes		Col.21 1
No		2

Q.12. Have you ever fallen out with your parents/step-parents because you have been drinking alcohol? (tick one)

Yes		Col.22 1
No		2

Q.13. Here is a list of different ways which are used to tell people about alcohol. Tick any that you have ever had IN YOUR SCHOOL, telling you about alcohol.

	Yes	No	Col.
Film or video			23: 1 2
Leaflet			24: 1 2
Guest Speaker			25: 1 2
Slide			26: 1 2
Lesson			27: 1 2
Book			28: 1 2
Other (specify)			29: 1

Q.14. Have you ever been given any information about alcohol or drinking from any of the following people OUTSIDE SCHOOL?

	Yes	No	
(a) A doctor or nurse			Col.30 1 2
(b) A person from the church			Col.31 1 2
(c) A special health visitor			Col.32 1 2
(d) Your parents			Col.33 1 2
(e) A friend			Col.34 1 2
(f) Someone on T.V. or radio			Col.35 1 2
(g) Someone in a newspaper or magazine			Col.36 1 2
(h) A grandparent			Col.37 1 2
(i) Anybody else (write in) _____			Col.38 1

Now here is a short quiz about alcohol.

Q.15. Read the following statements. If you think the statement is true, put a tick in the True column. If you think it is false, put a tick in the False column. If you are not very sure, put a tick in the Don't Know column.

		True	False	Don't Know	Col.
(a)	Alcohol makes you more alert.				39: 1 2 3
(b)	A single whisky (as measured in a pub) is stronger than a pint of beer.				40: 1 2 3
(c)	Alcohol is a drug.				41: 1 2 3
(d)	The same amount of alcohol affects males and females in the same way.				42: 1 2 3
(e)	Eating along with drinking will slow down the effects of alcohol.				43: 1 2 3
(f)	Adding soft drinks such as lemonade or fruit juice to alcoholic drinks helps the alcohol to leave the body more quickly.				44: 1 2 3
(g)	It is possible to drink small amounts of alcohol without harming health.				45: 1 2 3
(h)	Giving alcohol to accident victims can be dangerous.				46: 1 2 3
(i)	All lagers and ciders contain roughly the same amount of alcohol.				47: 1 2 3
(j)	Drinking only one pint of beer can affect driving skills and the chance of having an accident.				48: 1 2 3
(k)	It can be dangerous to drink alcohol if you have taken tablets or medicines.				49: 1 2 3
(l)	The human body gets rid of two pints of beer in one hour.				50: 1 2 3
(m)	Alcohol harms less people in Britain than illegal drugs such as heroin and cocaine.				51: 1 2 3
(n)	A glass of table wine contains much more alcohol than half a pint of cider.				52: 1 2 3
(o)	Drinking spirits is more likely to lead to problems with alcohol than drinking cider.				53: 1 2 3

For Office Use Only 54 55 Total A [ ][ ] 56 57 Total B [ ][ ]

Q.16. Have you ever tasted an alcoholic drink; even just a sip? Col. 58

(for example, cider, shandy, beer, lager whisky, port, sherry, Guinness, Martini, Babycham, champagne, wine, rum, gin, vodka).
(tick 'Yes' or 'No")

Yes		1
No		2

NOW READ THESE INSTRUCTIONS CAREFULLY

If you have ticked "yes", you have tasted an alcoholic drink, continue with Q.17.

If you have ticked "no", you have never tasted even one alcoholic drink, go to Q.29 on page 15. Do NOT answer questions 17-28.

For People Who Have Ever Tasted An Alcoholic Drink

Q.17. How old were you when you had your first taste of alcohol? Col.59
(tick one)

(a) 6 years old or younger		1
(b) 7-8 years old		2
(c) 9-10 years old		3
(d) 11-12 years old		4
(e) 13-14 years old		5

Q.18. Who gave you your first taste of alcohol? (tick one) Col.60

(a) Parent/step-parent/guardian		1
(b) An older brother		2
(c) An older sister		3
(d) A brother or sister not older than yourself		4
(e) An adult other than parents		5
(f) A boy or girl of your own age (apart from brothers or sisters)		6
(g) Other people - write in		7

Q.19. Below is a list of places where people sometimes have a drink. Tick any of these where you have ever had some alcohol to drink (Tick 'Yes" or 'No' for each).

	Yes	No	Col.
(a) In your own home			61: 1 2
(b) In the home of adult relatives or friends of your parents			62: 1 2
(c) In a public house or hotel			63: 1 2
(d) In the home of one of your own friends			64: 1 2
(e) At a disco			65: 1 2
(f) In the open air somewhere, such as a street or park			66: 1 2
(g) At a special occasion e.g. a wedding			67: 1 2
(h) Elsewhere - write in _____			68: 1 2

Q.20. When did you last have any alcohol to drink? (tick one)

		Col.69
Within last week		1
1-2 weeks ago		2
3-4 weeks ago		3
Over 4 weeks - 3 months ago		4
Over 3 months ago		5

Q.21. Whom were you with when you last had some alcohol to drink?
(tick "yes" or "no" to each)

	Yes	No	Col.
(a) Parents/step-parents/guardians			70: 1 2
(b) An older brother			71: 1 2
(c) An older sister			72: 1 2
(d) A brother or sister <u>not</u> older than yourself			73: 1 2
(e) An adult other than parents			74: 1 2
(f) A boy or girl of your own age apart from brothers or sisters			75: 1 2

<u>For Office Use Only</u>

Card 2

Respondent Code	1 - 2 - 3 - 4 [ ] [ ] [ ] [ ]
School Code	5 - 6 [ ] [ ]
Stream Code	7 [ ]
Card 2	8 [2]

Q.22. Where were you when you last had some alcohol? (tick one)

		Col.9
(a) In your own home		1
(b) In the home of adult relatives or friends of your parents		2
(c) In a public house or hotel		3
(d) In the house of one of your friends		4
(e) At a disco		5
(f) In the open air somewhere, such as a street or park		6
(g) At a special occasion e.g. a wedding		7
(h) Elsewhere - write in where _____		8

Q.23. Think about the last time you had some alcohol

Exactly how much did you drink on that occasion?

(a) How much cider, shandy, lager, beer, stout, etc. did you drink? (tick one) Col.10

None		1
1 or 2 sips		2
½-1 pint		3
1-2 pints		4
3-4 pints		5
More than 4 pints		6

(b) How many single glasses of Babycham, champagne, wine, Martini, sherry or port did you drink? (tick one) Col.11

None		1
1 or 2 sips		2
½-1 glass		3
1-2 glasses		4
3-4 glasses		5
More than 4 glasses		6

(c) How many single glasses of whisky, vodka, gin, rum, or other spirits did you drink? (tick one) Col.12

None		1
1 or 2 sips		2
½-1 glass		3
1-2 glasses		4
3-4 glasses		5
More than 4 glasses		6

Q.24.

(a) What is the most alcohol you have ever drunk on <u>one single occasion</u>? Col.13

(Write in) _____ 1 2 3

(b) Where did you have this alcohol? (tick one) Col.14

At home with parents		1
At home when parents out		2
At a friend's house with parents		3
At a friend's house when parents out		4
At a disco		5
Somewhere else - write in _____		6

(c) How often have you drunk this amount of alcohol? (tick one) Col.15

Once only		1
Occasionally		2
Often		3

Q.25. Below is given a list of ways people sometimes feel after they have been drinking. Read through the list, and put a tick to show <u>if you have ever felt like that</u> anytime you have been drinking alcohol.

		More than twice	Once or twice	Never	Col.
(a)	Happy				16: 1 2 3
(b)	Sad				17: 1 2 3
(c)	Relaxed				18: 1 2 3
(d)	Sick				19: 1 2 3
(e)	Feel like smashing things				20: 1 2 3
(f)	Feel warm				21: 1 2 3
(g)	Feel like a fight or an argument				22: 1 2 3

Q.26. Below is a list of some reasons why people drink alcohol. Put a tick by each item to show whether that reason is TRUE or FALSE for you.

		True	False	Don't Know	Col.
(a)	I like the taste				23: 1 2 3
(b)	So as not to be the "odd one out" in a group				24: 1 2 3
(c)	To calm my nerves and help me relax				25: 1 2 3
(d)	To give myself courage and confidence				26: 1 2 3
(e)	It helps me to talk to members of the opposite sex more easily				27: 1 2 3
(f)	So that my friends won't think I'm scared or "yellow"				28: 1 2 3
(g)	To help me mix more easily with other people				29: 1 2 3
(h)	To help me stop worrying about something				30: 1 2 3
(i)	Because my friends all drink				31: 1 2 3
(j)	Because it's an adult thing to do				32: 1 2 3
(k)	To look good in front of other people				33: 1 2 3
(l)	To find out what it's like				34: 1 2 3

Q.27.

(a) Do you think you have ever had a hangover? (tick one)

		Col.35
Yes		1
No		2

(b) How many times have you had a hangover in the last six months?

		Col.36
Never		1
Once only		2
2-3 times		3
4-5 times		4
Over 5 times		5

Q.28. Please tick "yes" or "no" to <u>each</u> of the following questions:

		Yes	No	Col.
(a)	Have you ever been told off by adults for drinking alcohol?			37: 1 2
(b)	Have you ever had problems at school because you have been drinking alcohol?			38: 1 2
(c)	Have you ever spent more money than you should on drink?			39: 1 2
(d)	Have you ever had trouble or quarrels with family or friends because you have been drinking alcohol?			40: 1 2
(e)	Have you ever had money problems because of your drinking?			41: 1 2
(f)	Have you ever had an accident or hurt yourself after drinking alcohol?			42: 1 2
(g)	Have you ever arrived late for school due to a hangover?			43: 1 2
(h)	Have you ever missed a day's school due to a hangover?			44: 1 2
(i)	Have you ever had an upset stomach because of drinking?			45: 1 2
(j)	Has your drinking ever worried you?			46: 1 2
(k)	Has your drinking ever caused you problems?			47: 1 2
(l)	Have you ever felt guilty or ashamed about your drinking?			48: 1 2

NOW GO TO QUESTION 32 ON PAGE 18.
MISS OUT QUESTIONS 29 TO 31.

ONLY ANSWER QUESTIONS 29-31 IF YOU HAVE NEVER TASTED AN ALCOHOLIC DRINK.

Q.29. Read through the questions below and then put a tick by each one to show how often these have happened to you.

		Often	Sometimes	Never	Col.
(a)	If someone offers you some alcohol have you ever been tempted to try it?				49: 1 2 3
(b)	When you are at a party or disco where some people are drinking alcohol do you ever feel "left out" of things?				50: 1 2 3
(c)	Do your friends ever urge you to try "just a little one", or try to persuade you to have a drink?				51: 1 2 3

Q.30. Below is a list of some reasons why people do NOT drink. Read through the list and tick each item to show whether that reason is TRUE or FALSE for you.

		True	False	Col.
(a)	I dislike the taste.			52: 1 2
(b)	Drinking is bad for you.			53: 1 2
(c)	Drinking costs too much.			54: 1 2
(d)	People who drink are unpleasant			55: 1 2
(e)	Drinking is against my religion			56: 1 2
(f)	Drinking makes people lose control of themselves.			57: 1 2
(g)	Once you start drinking you can't stop the habit.			58: 1 2
(h)	My parents disapprove strongly of anyone who drinks.			59: 1 2
(i)	I want to be fit.			60: 1 2
(j)	Drinking makes you put on weight.			61: 1 2
(k)	Some other reason (write what). _____ _____			62: 1 2

Q.31. Do you think you may sometimes drink alcohol when you get older? (tick one)

		Col.63
Yes		1
No		2
Don't Know		3

ALL THE REMAINING QUESTIONS SHOULD BE ANSWERED BY EVERYONE

Q.32. Have you ever tried any of the following either from curiosity or for "kicks"?
(tick "yes" or "no" for each).

		Yes	No	Col.
(a)	Cannabis ("pot", marihuana, "dope". "grass", "hash" "ganja")			64: 1 2
(b)	L.S.D. ("acid")			65: 1 2
(c)	Barbiturates			66: 1 2
(d)	Glues, solvents (by sniffing)			67: 1 2
(e)	Amphetamines (pep pills, "speed")			68: 1 2
(f)	Opium			69: 1 2
(g)	Morphine			70: 1 2
(h)	Heroin			71: 1 2
(i)	Cocaine or Crack			72: 1 2
(j)	Sleeping tablets/tranquillizers (e.g. Ativan, Mogadon, Librium, Valium)			73: 1 2
(k)	Other drugs (write what) _____			74: 1 2

Q.33. (a) Have you ever tried smoking tobacco? (either in cigarettes, cigars or a pipe) (tick one)

		Col.75
Yes		1
No		2

(b) About how many cigarettes do you smoke now? (tick one)

		Col.76
None		1
One a week or fewer		2
2-4 per week		3
5-10 per week		4
11-20 per week		5

(c) If a friend offered you a cigarette would you smoke it? (tick one)

		Col.77
Yes		1
No		2
Don't know		3

For Office Use Only

Card 3

	1 - 2 - 3 - 4
Respondent Code	[ ] [ ] [ ] [ ]
	5 - 6
School Code	[ ] [ ]
	7
Stream Code	[ ]
	8
Card 3	[3]

Q.34. Finally, here is a list of statements about alcohol. Put a tick for each statement to show whether you agree or disagree with it. Only use the 'Not Sure' box if you are completely stuck. Please try to be as honest as you can.

	Agree	Disagree	Not Sure	Col.
a) People who drink alcohol are never lonely.				9: 1 2 3
b) Buying alcohol is a waste of money.				10: 1 2 3
c) Even one drink can lead to trouble.				11: 1 2 3
d) Teenagers who drink alcohol are more adult than those who don't.				12: 1 2 3
e) A little alcohol makes a party go better.				13: 1 2 3
f) Young people who drink alcohol are more likely to get into trouble at school.				14: 1 2 3
g) Alcohol makes people bad-tempered.				15: 1 2 3
h) Young men are silly to think it's 'tough' to drink alcohol.				16: 1 2 3
i) People who never drink alcohol are a bit odd.				17: 1 2 3
j) Teenagers who drink alcohol are more attractive.				18: 1 2 3
k) Alcohol causes football hooliganism.				19: 1 2 3
l) People who drink alcohol are usually scruffy and untidy.				20: 1 2 3
m) Teenagers who drink alcohol have lots of friends of the opposite sex.				21: 1 2 3
n) Teenagers who never drink are more popular with adults.				22: 1 2 3

	Agree	Disagree	Not Sure	
o) Alcohol makes people more fun to be with.				23: 1 2 3
p) When teenagers drink alcohol they usually end up fighting.				24: 1 2 3
q) Teenagers who drink alcohol have a more exciting social life than teenagers who don't drink.				25: 1 2 3
r) People who don't drink are nicer people than drinkers.				26: 1 2 3
s) Alcohol makes people more friendly.				27: 1 2 3
t) The law should be changed to allow younger people to buy alcohol.				28: 1 2 3

29 30
TOTAL P [ ] [ ]

31 32
TOTAL N [ ] [ ]

THANK YOU VERY MUCH FOR YOUR HELP IN COMPLETING THIS QUESTIONNAIRE.

Now that you have answered all the questions in this questionnaire, try not to disturb the others who have not yet finished.

Just for fun, have a go at the word game on the next page.

WORD GAME

Note down all the words you can make out of the letters in

ALCOHOLIC DRINKS

The record so far is 40. Can you beat this?

If you like, you may tear this page off before handing in your questionnaire.

APPENDIX 2b. Survey Questionnaire
Welsh language version

Cyfrinachol

Prifysgol Caeredin

ADDYSG AR ALCOHOL

HOLIADUR CYCHWYNNOL

Hydref 1986

Grŵp Ymchwil ar Alcohol
Prifysgol Caeredin

At ddefnydd y swyddfa'n unig

Cerdyn 1

Côd yr atebwr	1-2-3-4 [ ][ ][ ][ ]
Côd yr ysgol	5-6 [ ][ ]
Côd y ffrwd	7 [ ]
Cerdyn 1	8 [1]

Mae'r holiaaur hwn yn rhan o astudiaeth sy'n ymchwilio i'r hyn y mae pobl ifainc fel chi yn ei wybod a'i feddwl am alcohol. Wedi ichi ateb y cwestiynau, byddwn yn mynd â'r holiaduron gyda ni rhag i'ch cyd-ddisgyblion weld eich atebion. Yr unig reswm pam yr ydym yn gofyn ichi am eich enw a'ch cyfeiriad yw er mwyn inni allu gofyn ichi am eich help unwaith eto ymhen deunaw mis.

Nawr, hoffwn ichi roi cynnig ar ateb y cwestiynau ar eich pen eich hun. Nid prawf nag arholiad yw hwn - yr hyn rydym eisiau ei wybod yw beth yn gwmws yr ydych yn ei feddwl am alcohol. Ychydig iawn o'r cwestiynau sydd ag atebion cywir neu anghywir iddyn nhw, felly triwch fod mor onest a diffuant â phosibl.

Ysgrifennwch eich enw'n llawn mewn LLYTHRENNAU BREISION isod:

_____ _____

Enw Teulu Enwau Cyntaf

Ysgrifennwch eich cyfeiriad cartref yn llawn mewn LLYTHRENNAU BREISION:

_____

_____

_____

Beth yw'ch dyddiad geni?
(Llenwch y bylchau)

		19
Dydd	Mis	Blwyddyn

Er enghraifft:

7	Awst	19 73
Dydd	Mis	Blwyddyn

Beth yw enw'ch ysgol? _____
(Ysgrifennwch)

Dosbarth: _____

Col. 9

C. 1. Nodwch os ydych

Bachgen		1
Merch		2

Col. 10

C. 2. Ym mha wlad y'ch ganed chi? (ticiwch un blwch)

Yr Alban		1
Lloegr		2
Cymru		3
Gogledd Iwerddon		4
Gweriniaeth Iwerddon		5
Rhywle arall		6

Col.11

C. 3. Gyda phwy ydych chi'n byw?

Tad a mam		1
Mam a llystad		2
Tad a llysfam		3
Mam yn unig		4
Tad yn unig		5
Taidcu a/neu famgu		6
Eraill (manylwch)		7

C. 4 (a) Pa fath o waith y mae'ch tad/llystad yn ei wneud fel arfer? Disgrifiwch yn glir mewn ychydig eiriau isod y gwaith hwn. Col.12 1 2

_____

_____

_____

(b) A yw'ch tad/llystad yn gweithio neu a yw'n ddiwaith ar hyn o bryd? (ticiwch un blwch) Col.13 1 2

Yn gweithio	
Yn ddiwaith	

C.5 (a) A oes swydd gyda'ch mam/llysfam y tu allan i'r cartref? (ticiwch un blwch) Col.14 1 2

Oes	
Nac oes	

(b) Ateb wch dim ond os oes swydd gyda hi. Pa fath o waith y mae'n ei wneud fel arfer? Disgrifiwch yn glir mewn ychydig eiriau isod y gwaith yma. Col.15 1 2

_____

_____

_____

C.6 Ydy'ch tad/llystad yn yfed alcohol o gwbl hyd yn oed os mai dim ond yn achlysurol? Col.16 1 2

Ydy	
Nac ydy	

C.7 Ydy'ch mam/llysfam yn yfed alcohol o gwbl, hyd yn oed os mai dim ond yn achlysurol?

Ydy		1
Nac ydy		2

Col.17

C.8 A fyddai ots gyda'ch tad/llystad pe baech yn yfed alcohol? (ticiwch un blwch)

Byddai		1
Na fyddai		2
Ddim yn gwybod		3

Col.18

C.9 A fyddai ots gyda'ch mam/llysfam pe baech yn yfed alcohol? (ticiwch un blwch)

Byddai		1
Na fyddai		2
Ddim yn gwybod		3

Col.19

C.10 A yw'ch tad/llystad wedi cynnig diod ichi erioed?

Ydy		1
Nac ydy		2

Col.20

C.11 A yw'ch mam/llysfam wedi cynnig diod ichi erioed? (ticiwch un blwch)

Ydy		1
Nac ydy		2

Col.21

C.12 A ydych wedi cwympo mas â'ch rhieni/llysrieni am ichi yfed alcohol? (ticiwch un blwch)

Ydw		1
Nac ydw		2

Col.22

C.13 Dyma restr o'r gwahanol ffyrdd a ddefnyddir i ddweud wrth bobl am alcohol. Ticiwch y rheiny 'rydych wedi'u cael YN YR YSGOL, yn sôn am alcohol.

	Ydw	Nac ydw	Col.
Ffilm neu fideo			23: 1 2
Taflen			24: 1 2
Siaradwr gwadd			25: 1 2
Sleidiau			26: 1 2
Gwers			27: 1 2
Llyfr			28: 1 2
Arall (manylwch)			29: 1

C.14 A ydych wedi derbyn gwybodaeth am alcohol neu am yfed gan unrhyw un o'r canlynol y TU ALLAN I'R YSGOL?

	Ydw	Nac ydw	
a. Doctor neu nyrs			Col.30 1 2
b. Person o'r eglwys			Col.31 1 2
c. Ymwelydd iechyd arbennig			Col.32 1 2
ch. Eich rhieni			Col.33 1 2
d. Cyfaill			Col.34 1 2
dd. Rhywun ar y teledu neu'r radio			Col.35 1 2
e. Rhywun mewn papur neu gylchgrawn			Col.36 1 2
f. Tadcu neu Famgu			Col.37 1 2
ff. Rhywun arall (manylwch) _____			Col.38 1

Nawr, dyma gwis bach am alcohol.

C.15 Darllenwch y sylwadau a ganlyn. Os ydych yn credu'u bod yn wir, rhowch dic yn y golofn 'Gwir'. Os nad ydych yn credu'u bod yn wir, rhowch dic yn y golofn 'Gau'.

		Gwir	Gau	Dim yn gwybod	Col.
a.	Cyffur yw alcohol				39: 1 2 3
b.	Mae peint o gwrw cyn gryfed ag un wisgi (mesuriadau tafarn)				40: 1 2 3
c.	Mae alcohol yn eich gwneud yn fwy bywiog.				41: 1 2 3
ch.	Mae'r un faint o alcohol yn cael yr un faint o effaith ar daynion a menywod.				42: 1 2 3
d.	Mae bwyta ac yfed yr un pryd yn lleddfu ar effeithiau'r alcohol.				43: 1 2 3
dd.	Mae ychwanegu diodydd meddal fel lemonêd a sudd ffrwythau at ddiodydd alcoholig yn helpu'r alcohol i adael y corff yn gynt.				44: 1 2 3
e.	Mae'n bosibl yfed tameidiau bach o alcohol heb niweidio'r iechyd.				45: 1 2 3
f.	Mae'n beryglus rhoi alcohol i bobl sydd newydd gael damwain.				46: 1 2 3
ff.	Mae tua'r un faint o alcohol ym mhob sidir a lager.				47: 1 2 3
g.	Gall yfed ond un peint o gwrw effeithio ar eich gallu i yrru ac i osgoi damweiniau.				48: 1 2 3
ng.	Gall yfed alcohol ar ôl cymryd tabledi neu foddion fod yn beryglus.				49: 1 2 3
h.	Mae'r corff dynol yn cael gwared ar ddau beint o gwrw mewn awr.				50: 1 2 3
i.	Mae alcohol yn niweidio llai o bobl ym Mhrydain nag yw cyffuriau anghyfreithlon megis heroin, cocain.				51: 1 2 3
l.	Ceir llawer mwy o alcohol mewn gwydraid o win bwrdd nag a geir mewn hanner peint o sidir.				52: 1 2 3
ll.	Mae'n fwy tebygol y cewch broblemau ag alcohol o yfed gwirodydd nag o yfed sidir.				53: 1 2 3

At ddefnydd y swyddfa'n unig Cyfanswm A [54] [55] Cyfanswm B [56] [57]

C.16 A ydych wedi blasu un llwnc hyd yn yn oed, o ddiod alcoholig erioed? (e.e sidr, shandy cwrw, lager, wisgi, port, sieri, Guiness, Martini, Babycham, champagne, gwin, rwm, gin, fodca).(Ticiwch 'Ydw' neu 'Nac ydw')

		Col.58
Ydw		1
Nac ydw		2

NAWR, DARLLENWCH Y CYFARWYDDIADAU HYN YN OFALUS

Os gwnaethoch dicio 'Ydw', sef eich bod wedi blasu diod alcoholig, ewch ymlaen at C.17.

Os gwnaethoch dicio 'Nac ydw', sef nad ydych wedi blasu diod alcoholig erioed yn eich bywyd, ewch at C.29 ar dud. 16. PEIDIWCH ag ateb cwestiynau 17-28.

Ar Gyfer Pobl Sydd Wedi Blasu Diod Alcoholig

C.17 Beth oedd eich oedran pan gwnaethoch flasu alcohol gyntaf? (ticiwch un blwch)

		Col.59
a. 6 blwydd neu lai		1
b. 7-8 blwydd oed		2
c. 9-10 blwydd oed		3
ch. 11-12 blwydd oed		4
d. 13-14 blwydd oed		5

C.18 Gan bwy y cawsoch eich blas cyntaf o alcohol? (ticiwch un blwch)

		Col.60
a. Rhiant/llysriant/gwarcheidwad		1
b. Brawd hŷn		2
c. Chwaer hŷn		3
ch. Brawd neu chwaer nad yw'n hŷn na chi		4
d. Oedolyn ac eithrio rhiant		5
dd. Bachgen neu ferch yr un oedran â chi ar wahân i'ch brodyr neu chwiorydd)		6
e. Pobl eraill - manylwch		7

C.19 Isod, rhestrir llefydd y mae pobl weithiau'n yfed ynddynt. Ticiwch y rheiny yr ydych wedi yfed alcohol ynddynt. (Ticiwch 'Do' neu ;'Naddo' i bob un)

	Do	Naddo	Col.
a. Yn eich cartref			61: 1 2
b. Yng nghartref perthnasau mewn oed neu ffrindiau'ch rhieni			62: 1 2
c. Mewn tafarn neu westy			63: 1 2
ch. Yng nghartre un o'ch ffrindiau'ch hun			64: 1 2
d. Mewn disgo			65: 1 2
dd. Yn yr awyr agored yn rhywle, fel stryd neu barc			66: 1 2
e. Ar achlysur arbennig e.e. priodas			67: 1 2
f. Yn rhywle arall - manylwch			68: 1 2

C.20 Pryd cawsoch unrhyw alcohol i'w yfed ddiwethaf? (ticiwch un blwch)

		Col.69
O fewn yr wythnos ddiwethaf		1
1-2 wythnos yn ôl		2
3-4 wythnos yn ôl		3
Dros 4 wythnos - 3 mis yn ôl		4
Dros 3 mis yn ôl		5

C.21 Gyda phwy oeddech chi pan gawsoch ddiod ddiwethaf? (ticiwch 'Ie' neu 'Nage' ar gyfer pob blwch)

	Ie	Nage	Col.
a. Rhieni/llysrieni/gwarcheidwaid			70: 1 2
b. Brawd hŷn			71: 1 2
c. Chwaer hŷn			72: 1 2
ch. Brawd neu chwaer nad yw'n hŷn na chi.			73: 1 2
d. Oedolyn ac eithrio rhieni			74: 1 2
dd. Bachgen neu ferch yr un oedran â chi (ar wahân i'ch brodyr neu chwiorydd)			75: 1 2

At ddefnydd y swyddfa'n unig

Cerdyn 2

Côd yr Atebwr [1][2][3][4]

Côd yr Ysgol [5][6]

Côd y Ffrwd [7]

Cerdyn 2 [8] [2]

C.22 Ble oeddech chi pan gawsoch alcohol ddiwethaf? (ticiwch un blwch)

Col.9

a.	Yn eich cartref	1
b.	Yng nghartref perthnasau mewn oed neu gyfeillion eich rhieni	2
c.	Mewn tafarn neu westy	3
ch.	Yng nghartref un o'ch ffrindiau	4
d.	Mewn disgo	5
dd.	Rhywle yn yr awyr agored, fel stryd neu barc	6
e.	Ar achlysur arbennig e.e. priodas	7
f.	Yn rhywle arall - manylwch	8

C.23 Meddyliwch am y tro diwethaf ichi gael alcohol

Faint yn gwmws a wnaethoch ei yfed ar yr achlysur hwnnw?

a. Faint o sidr, shandy, lager, cwrw, stowt, ac ati a wnaethoch ei yfed? (ticiwch un blwch)

Col:10

Dim		1
1 neu 2 lwnc		2
$\frac{1}{2}$–1 peint		3
1–2 beint		4
3–4 peint		5
Mwy na 4 pheint		6

b. Sawl gwydraid sengl o Babycham, champagne, gwin, Martini, sieri neu port a wnaethoch ei yfed (ticiwch un blwch)

Col:11

Dim		1
1–2 lwnc		2
$\frac{1}{2}$–1 gwydraid		3
1–2 wydraid		4
3–4 gwydraid		5
Mwy na 4 gwydraid		6

c. Sawl gwydraid sengl o wisgi, fodca, gin, rwm neu wirodydd eraill wnaethoch ei yfed? (ticiwch un blwch)

Col.12

Dim		1
1–2 lwnc		2
$\frac{1}{2}$–1 gwydraid		3
1–2 wydraid		4
3–4 gwydraid		5
Mwy na 4 gwydraid		6

C.24

a. Beth yw'r swm mwyaf o alcohol ichi ei yfed erioed ar un achlysur?

(Manylwch)_____ Col.13 1 2 3

b. Ble cawsoch chi'r alcohol yma? (ticiwch un blwch) Col.14

Adref gyda'ch rhieni		1
Adref â'ch rhieni allan		2
Yng nghartref ffrindiau gyda'u rhieni		3
Yng nghartref ffrindiau â'u rhieni allan		4
Mewn disgo		5
Yn rhywle arall - manylwch		6

c. Sawl gwaith ydych wedi yfed cymaint â hyn o alcohol? (ticiwch un blwch) Col.15

Unwaith yn unig		1
Yn achlysurol		2
Yn aml		3

C.25 Rhestrir isod sut mae pobl weithiau'n teimlo wedi iddyn nhw fod yn yfed. Darllenwch y rhestr a rhowch dic i ddweud os yr ydych wedi teimlo fel yna erioed unrhyw bryd wedi ichi fod yn yfed alcohol.

		Yn aml	O dro i dro	Byth	Col.
a.	Yn hapus				16: 1 2 3
b.	Yn drist				17: 1 2 3
c.	Wedi ymlacio				18: 1 2 3
ch.	Yn dost				19: 1 2 3
d.	Yn teimlo awydd i chwalu pethau				20: 1 2 3
dd.	Yn teimlo'n gynnes				21: 1 2 3
e.	Yn teimlo awydd i ymladd neu ddadlau				22: 1 2 3

C.26 Isod, rhestrir rhai o'r rhesymau pam mae pobl yn yfed alcohol. Ticiwch bob eitem i ddangos pa reswm sy'n WIR neu'n GAU yn eich achos chi.

		Gwir	Gau	Ddim yn Gwybod	Col.
a.	Rwy'n hoffi'r blas				23: 1 2 3
b.	Er mwyn cael gwneud yr un peth â phawb arall mewn grŵp				24: 1 2 3
c.	I dawelu fy nerfau a'm helpu i ymlacio				25: 1 2 3
ch.	I roi hyder a dewrder imi				26: 1 2 3
d.	Mae'n fy helpu i siarad ag aelodau'r rhyw arall				27: 1 2 3
dd.	Rhag i'm ffrindiau feddwl fod ofn arnaf neu fy mod yn 'gachgi'				28: 1 2 3
e.	I'm helpu i ddod ymlaen yn well â phobl eraill				29: 1 2
f.	Rhag imi boeni am rywbeth				30: 1 2 3
ff.	Gan fod fy ffrindiau i gyd yn yfed				31: 1 2 3
e.	Am ei fod yn rhywbeth y mae oedolion yn ei wneud				32: 1 2 3
g.	Er mwyn edrych yn dda o flaen eraill				33: 1 2 3
ng.	Er mwyn cael gwybod sut fath o beth ydyw				34: 1 2 3

C.27 a. A ydych wedi cael pen tost ar ôl meddwi erioed? (ticiwch un blwch) Col.35

Ydw		1
Nac ydw		2

b. Sawl gwaith ydych chi wedi cael pen tost ar ôl meddwi yn ystod y chwe mis diwethaf? Col.36

Byth		1
Unwaith yn unig		2
2-3 gwaith		3
4-5 gwaith		4
Mwy na 5 gwaith		5

C.28 Ticiwch 'Do' neu 'Naddo' ar gyfer pob cwestiwn:

		Do	Naddo	Col.
a.	A ydych wedi cael pryd o dafod gan oedolion am ichi yfed alcohol erioed?			37: 1 2
b.	A greuwyd problemau ichi yn yr ysgol am ichi yfed alcohol?			38: 1 2
c.	A wnaethoch wario mwy nag y dylech ar yfed erioed?			39: 1 2
ch.	A gawsoch helbul neu gweryl erioed gyda'ch teulu neu'ch ffrindiau am ichi fod yn yfed alcohol.			40: 1 2
d.	A greuwyd problemau ariannol gan eich yfed?			41: 1 2
dd.	A gawsoch ddamwain neu ddolur erioed ar ôl yfed alcohol?			42: 1 2
e.	A wnaethoch gyrraedd yr ysgol yn hwyr erioed am fod pen tost ar ôl meddwi arnoch?			43: 1 2
f.	A wnaethoch golli diwrnod o ysgol am fod pen tost ar ôl meddwi arnoch?			44: 1 2
ff.	A gawsoch fola tost erioed am ichi fod yn yfed?			45: 1 2
g.	A fu'ch yfed yn destun pryder ichi erioed?			46: 1 2
ng.	A greuir problemau ichi gan eich yfed?			47: 1 2
h.	A wnaethoch deimlo'n euog neu a fuodd cywilydd arnoch oherwydd eich yfed?			48: 1 2

NAWR, EWCH YMLAEN AT GWESTIWN 32 AR DUD. 18.
PEIDIWCH AG ATEB CWESTIYNAU 29-31.

ATEBWCH GWESTIYNAU 29-31 OS NAD YDYCH WEDI BLASU DIOD ALCOHOLIG ERIOED.

C.29 Darllenwch y cwestiynau isod a rhowch dic wrth bob un i ddangos pa mor aml y maent wedi digwydd ichi.

		Yn aml	O dro i dro	Byth	Col.
a.	Os oes rhywun wedi cynnig alcohol ichi, ac a ydych wedi cael eich temtio i dderbyn?				49: 1 2 3
b.	Os ydych mewn parti neu ddisgo lle mae rhai pobl wrthi'n yfed alcohol, ydych chi'n teimlo eich bod 'allan' ohoni?				50: 1 2 3
ch.	A ydy'ch ffrindiau yn eich cymell i drio 'un bach', neu'n trio eich perswadio i gael diod?				51: 1 2 3

C.30 Isod, rhestrir rhai o'r rhesymau pam NAD yw pobl yn yfed. Darllenwch y rhestr a thiciwch bob eitem i ddangos a yw'r rheswm hwnnw'n WIR neu'n GAU yn eich achos chi.

		Gwir	Gau	Col.
a.	Dwi ddim yn hoffi'r blas			52: 1 2
b.	Mae yfed yn ddrwg ichi			53: 1 2
c.	Mae yfed yn rhy ddrud			54: 1 2
ch.	Mae pobl sy'n yfed yn annymunol			55: 1 2
d.	Mae yfed yn erbyn fy naliadau crefyddol			56: 1 2
dd.	Mae yfed yn gwneud i bobl golli gafael arnynt eu hunain			57: 1 2
e.	Unwaith ichi ddechrau yfed, mae'n anodd rhoi'r gorau iddi			58: 1 2
f.	Mae fy rhieni yn gwrthwynebu yfed			59: 1 2
ff.	Rwy am fod yn heini			60: 1 2
g.	Mae yfed yn gwneud ichi roi pwysau ymlaen			61: 1 2
ng.	Rhyw reswm arall (manylwch) _____ _____			62: 1 2

C.31 Ydych chi'n credu y gwnewch chi yfed alcohol weithiau pan fyddwch yn hŷn (ticiwch un blwch)

		Col.63
Ydw		1
Nac ydw		2
Ddim yn gwybod		3

DYLAI PAWB ATEB Y CWESTIYNAU SY'N WEDDILL

C.32 A ydych wedi rhoi cynnig ar y canlynol, naill ai oherwydd chwilfrydedd neu am 'sbort'? (ticiwch 'ydw' neu 'nac ydw' am bob un)

		Ydw	Nac ydw	Col.
a.	Cannabis ('pot', marihuana, 'dôp', 'gwair', 'grass', 'hash', 'ganja')			64: 1 2
b.	L.S.D. ('asid', diethylamid asid lysergaidd/25)			65: 1 2
c.	Barbituradau			66: 1 2
ch.	Gludion, toddyddion, (trwy ffroeni)			67: 1 2
d.	Amphetaminau (pep pills, spid)			68: 1 2
dd.	Opiwm			69: 1 2
e.	Morffîn			70: 1 2
f.	Heroin			71: 1 2
ff.	Cocain neu Crac			72: 1 2
g.	Tabledi Cysgu/Tawelyddion (e.e Ativan, Mogadon, Librium, Valium)			73: 1 2
ng.	Cyffuriau eraill (manylwch)			74: 1 2

C.33 A ydych wedi trio smygu baco erioed?

a. (naill ai mewn sigaret, sigâr neu bîb)
(ticiwch un blwch)

	Col.75
Ydw	1
Nac ydw	2

b. Sawl sigaret ydych chi'n ei smygu nawr?
(ticiwch un blwch)

		Col.76
Dim		1
Un yr wythnos neu lai		2
2-3 yr wythnos		3
5-10 yr wythnos		4
11-20 yr wythnos		5

c. Pe bai cyfaill yn cynnig sigaret ichi, a fyddech yn ei smygu?
(ticiwch un blwch)

		Col.77
Buaswn		1
Na fuaswn		2
Ddim yn gwybod		3

At ddefnydd y swyddfa'n unig — Cerdyn 3

Côd yr Atebwr [1][2][3][4]

Côd yr Ysgol [5][6]

Côd y Ffrwd [7]

Cerdyn 3 [8] [3]

C.34 I gloi, dyma restr o sylwadau am alcohol. Rhowch dic wrth y sylwadau i ddangos a ydych chi yn cytuno â hwy ai peidio. Ticiwch y blwch 'Ddim yn Siŵr' os na fedrwch benderfynu un ffordd neu'r llall. Ceisiwch fod mor onest â phosibl.

		Cytuno	Anghytuno	Ddim yn Siwr	Col.
a.	Nid yw pobl sy'n yfed alcohol fyth yn unig.				9: 1 2 3
b.	Mae prynu alcohol yn wastraff ar arian.				10: 1 2 3
c.	Gall un diod hyd yn oed arwain at helynt.				11: 1 2 3
ch.	Mae pobl ifainc sy'n yfed alcohol yn fwy aeddfed na'r rheiny nad ydynt yn gwneud.				12: 1 2 3
d.	Mae ychydig o alcohol yn rhoi hwb i barti.				13: 1 2 3
dd.	Mae pobl ifainc sy'n yfed alcohol yn fwy tebygol o fynd i helynt yn yr ysgol.				14: 1 2 3
e.	Mae alcohol yn gwneud pobl yn ddrwg eu hwyl.				15: 1 2 3
f.	Mae dynion ifainc yn dwp i feddwl bod yfed alcohol yn beth 'caled'.				16: 1 2 3
ff.	Mae pobl nad ydynt fyth yn cyffwrdd ag alcohol braidd yn rhyfedd.				17: 1 2 3
g.	Mae pobl ifainc sy'n yfed alcohol yn fwy deniadol.				18: 1 2 3
ng.	Mae alcohol yn achosi hwliganiaeth ymysg cefnogwyr pelaroed.				19: 1 2 3
h.	Mae pobl sy'n yfed alcohol fel arfer yn anniben a diraen.				20: 1 2 3
i.	Mae gan bobl ifainc sy'n yfed alcohol lawer o ffrindiau o'r rhyw arall.				21: 1 2 3
l.	Mae deddfion yn meddwl yn fwy o bobl ifainc nad ydynt yn yfed alcohol.				22: 1 2 3
ll.	Mae alcohol yn gwneud pobl yn fwy o sbort.				23: 1 2 3

		Cytuno	Anghytuno	Daim yn Siwr	
m.	Mae pobl ifainc sy'n yfed alcohol, fel arfer yn mynd i ymladd.				24: 1 2 3
n.	Mae gan bobl ifainc sy'n yfed alcohol fywydau cymdeithasol mwy bywiog na'r rheiny nad ydynt yn gwneud.				25: 1 2 3
o.	Mae pobl nad ydynt yn yfed alcohol yn bobl fwy dymunol na'r rheiny nad ydynt yn gwneud.				26: 1 2 3
p.	Mae alcohol yn gwneud pobl yn fwy serchus.				27: 1 2 3
ph.	Dylid newid y gyfraith er mwyn i bobl ifainc allu prynu alcohol.				28: 1 2 3

DIOLCH O GALON AM GWBLHAU'R HOLIADUR

Cyfanswm P [29] [30]

Cyfanswm N [31] [32]

Gan eich bod nawr wedi ateb holl gwestiynau'r holiadur, peidiwch â tharfu ar y rheiny nad ydynt eto wedi dibenu.

Am hwyl, rhowch gynnig ar y gêm geiriau ar y dudalen nesaf.

GÊM GEIRIAU

Nodwch yr holl eiriau y medrwch eu llunio o lythrennau'r geiriau.

DIODYDD ALCOHOLIG

Y gorau hyd yma yw 25. A ellwch faeddu hyn? Cewch dynnu'r dudalen hon cyn dychwelyd eich holiadur.

APPENDIX 3. Alcohol Education Materials for Pilot Study

ALCOHOL EDUCATION PACKAGE

MANUAL FOR TEACHERS

Pilot Version
November 1986

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INTRODUCTION

This alcohol education package is part of an evaluation study being conducted by the Alcohol Research Group at Edinburgh University. The materials are suitable for 12 - 13 year old children, and emphasise participatory learning activities. The complete package has been designed for use either as a free-standing module of approximately five hours' total teaching time, or as part of a broader social/health education programme.

Overall, the package has two principle aims:

1) To provide a framework which will allow pupils to think about alcohol in a way which is relevant to their own immediate and perceived future experience.

2) To help pupils begin to develop the necessary skills to make reasoned choices.

In a broader sense, it is hoped that this package will enable pupils to build up a store of information and potential skills which can be extended beyond the context of alcohol.

CONTENT AND METHOD

The content of the package is subdivided into various activities, which are reproduced on individual pupil worksheets. An average time of approximately 25 minutes should be allowed for each activity. Obviously some of these will take longer than others, and there is ample opportunity for you to introduce flexibility to fit in with your specific requirements. There are four pupil worksheets, subdivided into activities as shown below:

Worksheet 1

Activity A - It's your choice.
Activity B - More Difficult Choices.

Worksheet 2

Activity A - One Unit of Alcohol.
Activity B - Alcohol and Your Body) Information sheets
Activity C - Alcohol and Behaviour) provided.

Worksheet 3

Activity A - Stop and Think.
Activity B - At the Disco.
Activity C - Part 1: Alcohol Advertisements
Part 2: Another Picture of Alcohol
Activity D - What Will Kanay Do?

Worksheet 4

Activity A - Jo from Jupiter.
Activity B - Quiz } Reference to Information Sheets.

The remainder of the manual provides detailed information for each activity. This covers learning outcomes, basic methodology and suggested guidelines for administration. A complete set of pupil worksheets is included, with answers provided where appropriate.

At the end of the manual, you will find a 'feedback form for teachers'. This form will give you the opportunity to note down your reactions and comments about the package. The form is in two parts; part 1 asks questions about each specific activity while part 2 seeks information about the package as a whole. It would therefore be simplest if you fill in part 1 as you progress through the materials, and part 2 once you have completed the package. At this development phase of the alcohol education package, it is crucial to have comments from teachers like you who have experience of using the materials with their pupils. Such information will form the basis of any modifications to the materials before the package is evaluated at national level.

Notes for Pupil Worksheet 1.

The first Pupil Worksheet emphasises choice and making decisions in a general context which is not specifically alcohol related.

Learning outcomes

Activity A
1) Pupils realise that in everyday life they are constantly making choices.
2) Pupils realise the possibility of alternatives to the choices, including choosing nothing.

Activity B
3) Pupils realise the desirability of acquiring accurate information before choosing.

METHOD: A copy of Pupil Worksheet 1 should be given to each pupil. Each activity should be completed individually, followed by a class discussion.

Activity A - 'It's Your Choice'

Explain what has to be done, and work through the example. When the majority have finished activity A, compare some of the choices round the class. It is quite possible that some members of the class will openly disapprove of the choice made by others. Such a reaction should be used to introduce the idea of each individual's right to choose. Pupils should also be encouraged to regard 'nothing' as an alternative to the choices provided.

Activity B - 'More Difficult Choices'

Pupils should try to work through this list just as they did in Activity A; some time should be allowed to think about the two questions at the end. A class discussion should then be structured round these questions, emphasising the need for accurate information in order to make a sensible choice.

Notes for Pupil Worksheet 2

Learning Outcomes:

Pupils increase their knowledge about

1) the equivalence between various alcoholic drinks - Activity A
2) factors which influence the effects of alcohol on the body - Activity B
3) the effects of alcohol over time on individual behaviour - Activity C.

METHOD: A copy of Pupil Worksheet 2 should be given to each pupil. Each activity should be introduced briefly by the teacher, and then completed individually (or in small groups), followed by a

class discussion.

Suggested Introduction to Worksheet 2. "Last time we saw that to make a good choice you need to know something about what it is you are choosing between. Let's think now about making choices in one particular area. You probably all know some people who choose to drink beer, some who prefer to drink whisky, and some who choose not to drink alcohol at all. Why do you think so many people do choose to drink alcohol?"

Encourage the class to suggest some reasons, and note these down. If prompting is needed, suggest they consider such things as 'what does alcohol do for people - how does it make them feel/behave?' You will probably end up with a short list of reasons such as 'alcohol makes people feel more relaxed, or alert, or confident with other people' etc..

Activity A - 'One Unit of Alcohol'

Suggested Introduction : "Now let's see if some of these reasons fit in with what is known about alcohol and its effects. The first kind of information we're going to look at is how strong different alcoholic drinks are.

People don't ask for a drink of alcohol, what do they usually ask for?" (Allow class to provide examples - sherry, lager, cider, whisky ---- etc.). "But a glass of whisky is always much smaller than a glass of beer, or even a glass of wine. This has to do with the amount of alcohol that each of these drinks contains".

Then direct pupils to Activity A on Worksheet 2; note that the table at the end should be completed individually. When most of the class appear to have filled in the table, work through the correct answers with them.

Activity B - 'Alcohol and your Body'

To complete this exercise, pupils will each need a copy of the information sheet for Activity B (or they could share one and complete the exercise as a group activity). Direct the class to Activity B, and read through the introductory text with them if you feel there are pupils who require this guidance. [N.B. - the arrows are inserted only in the teacher's copy of this activity]. When the majority have finished, correct this 'matching' exercise with the class, allowing questions and discussion as appropriate.

Activity C - 'Alcohol and Behaviour'

As in the previous activity, read through the introductory text with the class. Hand out the sheets with the numbered cartoons on them, and explain that the task is to decide the correct order of the cartoons for the first column of the table.

In order to make this decision, it is necessary to read through the table first - do this aloud with the class and then leave them to select the cartoon numbers. Alternatively, pupils could be encouraged to draw their own cartoons, to illustrate each type of behaviour. If time permits it would be useful to have a class discussion about what the table tells us. Even if this is not possible, there are three main points to bring out of this exercise in checking the correct order of the cartoon illustrations:

a) emphasise the LINKS between the various aspects of the table.

b) emphasise the idea that although people may feel good and think they are fine, their judgement or co-ordination may not be so good.

c) discuss the implications of (b) for all kinds of accidents. For example, if your speed of reaction, your co-ordination, your judgement and your vision are all affected, then you are more likely to be involved in an accident, as a pedestrian, (especially when crossing a road or walking beside water) as a cyclist or motorcyclist or as a car driver.

Notes for Pupil Worksheet 3

Worksheet 3 concentrates on the nature of social influences on decisions concerning alcohol. The areas to be examined here are peer group pressure, advertising and the media.

Learning Outcomes:

Activity A.

1. Pupils are aware of
   a) different levels of importance in decision making
   b) the possibility of group pressure on their own decision making
   c) the need to respect the choice of others.

2. Pupils realise the influence of other people on teenage drinking behaviour - Activity B.

3. Pupils realise the contrasting nature of public images of alcohol in advertisements and the media - Activity C.

The final activity allows pupils to apply some of the ideas in Worksheet 3 to a fictitious case-study. It is an open-ended exercise, allowing pupils to explore social influences on alcohol related decisions from their own perspective and experience.

METHOD : The materials for each activity should be worked through as suggested below. Once again the emphasis is on small group work followed by class discussion.

Activity A - 'Stop and Think'

1. Each pupil should have their own copy of Worksheet 3, Activity A. Explain that for each situation in the grid they must consider how much thought and further investigation would be necessary before the decision can be made. Then, in the column headed "My Order", they have to write down beside Number 1 the situation they think would need the most thought and further investigation. Then beside Number 2, the situation coming 2nd in its need for forethought, and so on until all the situations have been ranked in order.

2. Divide the class into groups of five or six, to compare results and decide amongst themselves on a group order for all the situations. This should be

filled in on the grid.

3. Bring the groups together and compare group orders, allowing open discussion as appropriate.

4. Each pupil should then spend a few minutes thinking about the questions below the grid. Their answers should be used to stimulate a general class discussion on this activity.
The two main points to bring out in concluding the discussion are :

a) everyone should realise how easily their decisions can be influenced and changed by what their friends think.
b) different people see the same decisions differently, for perfectly acceptable reasons.

Activity B - 'At the Disco'

Divide the class into small groups and hand out copies of the 'disco picture'.

Suggested Introduction : "Look at the picture and discuss it amongst yourselves for a few minutes. Jot down some answers to the questions".

Bring the groups together, comparing answers as a stimulus to class discussion. The points emerging should include peer group pressure, legal restrictions on under-age drinking and parental disapproval (question 7).

Activity C

Part 1 - Alcohol Advertisements

Divide the class into small groups and provide each group with a copy of Pupil Worksheet 3, Activity C, Part 1. A collage of alcohol advertisements is provided in the worksheet, but this can be supplemented from various sources. (For example, you could use a video of some alcohol advertisements on TV, or you could ask the pupils to cut out and bring in some alcohol advertisements from home).

Whatever stimulus material you use, firstly explain to the groups that they are going to look for the messages in the adverts.

Then ask each group to complete the questions in Part 1 as quickly as they can.

Bring the groups together and discuss their answers, using what the pupils have said to explore some of the techniques used by advertisers to sell their product. For instance, in question 1 you could discuss how the use of famous, handsome or apparently sociable people implies that if you use that product, you could become like them.

In question 2, you could discuss the use of language - e.g. superlatives, 'positive' words etc. - in creating a desirable product.

In question 3, try to sum up by considering the argument that the advertisements show only the beneficial aspects of the product. Is there any aspect not presented by the advertiser?
Then move on to Activity C Part 2.

Activity C

Part 2 - Another Picture of Alcohol

Hand out copies of Activity C part 2 to small groups. Ask pupils to read the selection of press cuttings about alcohol, and to think for a short time about the questions on the worksheet. Then bring the class together for a group discussion structured round their answers.

Parts 1 and 2 of Activity C should be concluded by re-iterating the main points raised.

Suggested: Conclusion

"We have seen how different messages about alcohol are given from different sources. The two different sources we have looked at are advertising and news coverage. Can you think of any other sources?"

Optional home-based activity

A good example for broadening the discussion is the portrayal of alcohol consumption in television programmes. For example, you could ask the class how often they see "JR" pouring himself a whisky in "Dallas". Then suggest that the next time they watch a programme of this kind, they think about the image of alcohol coming from the programme. Explain that "to do this, it is necessary to ask WHERE is the person having the drink, and WHY; how does he/she seem to FEEL or BEHAVE after the drink? Discuss this with your family, and see if the image they receive is the same as yours. Note down your conclusions, and discuss these with your friends and at school."

Activity D - 'What Will Kanay Do?'

Each pupil should have a copy of the short story and photograph. They should read the brief story, and be encouraged to try to put themselves in Kanay's position.

Then ask them to write down "If I were Kanay I would .....". Explain that they have to complete the sentence, stressing that the word is WOULD and not SHOULD, i.e. what do they think Kanay would do next.

Combine the pupils into small groups, to compare their ideas on what Kanay would do next. Then ask them to note down, as a group, what they think Kanay SHOULD do. Feed in prompts if necessary to aid group discussion. For example :

Should he give in?
Should he appeal to a particularly close friend?
Should he admit respect for the wishes of his parents?
Should he propose an alternative?
Should he ask them all to leave?

Bring the groups together for class discussion. Allow the discussion to be shaped by the youngsters' own ideas, but ultimately try to structure it

around some of the following points:

Did all groups agree on what Kanay should do?
Were the proposed courses of action realistic?
Can the pupils decide whether Kanay 'won' or 'lost' the situation?

Optional Role - Play Exercise: As an alternative or extension to the above exercises on Activity D, pupils could explore possible solutions to Kanay's problem through role-play.

Working in small groups, ask pupils to re-read the short story, and to decide on a possible ending. Stress that the idea is to look for ways in which Kanay could deal with the situation if it should arise again.

Bring the groups together and invite feedback from them on what they discovered through their role play.

Suggested Conclusion: Worksheet 3 includes a variety of activities, and it would be helpful to recap briefly. This can be done using the learning outcomes listed at the beginning of this worksheet.

Notes for Pupil Worksheet 4

Learning outcomes

Activity A 1) Pupils recap and consolidate on what they see as the key points about alcohol from the package.

Activity B 2) Pupils assess their own knowledge of alcohol.

Activity A - 'Jo from Jupiter'

Divide the class into small groups and hand out a copy of 'Jo from Jupiter' to each pupil.

Suggested introduction - Explain that Jo has come to earth from Jupiter and is eager to learn about earthly pleasures and habits. Jo is especially interested to find out about alcohol, although does not understand what it is, where to find it or why people drink it.

Ask the pupils to think about what they would tell Jo; encourage them to discuss their answers in their small groups before filling in their own worksheets. If prompting is needed, suggest they consider questions such as "does everyone drink alcohol?" (introducing the idea of individual factors, social pressures etc.).

Activity A should then be completed individually (possibly as a home exercise). Provision is made on the worksheet for four points to be noted; explain that from all the points discussed, each person must select the four he/she thinks are the most important key points to tell Jo about alcohol.

A short discussion session can be conducted round comparison of choice of key points.

Activity B - 'What do you know?'

A copy of the short quiz should be handed out to all pupils. Read through the instructions with the class, reminding them to refer to the Information Sheet for Worksheet 2 as necessary.

When everyone has completed the quiz (once again, this could be a home activity), go over the correct answers, encouraging discussion as it arises.

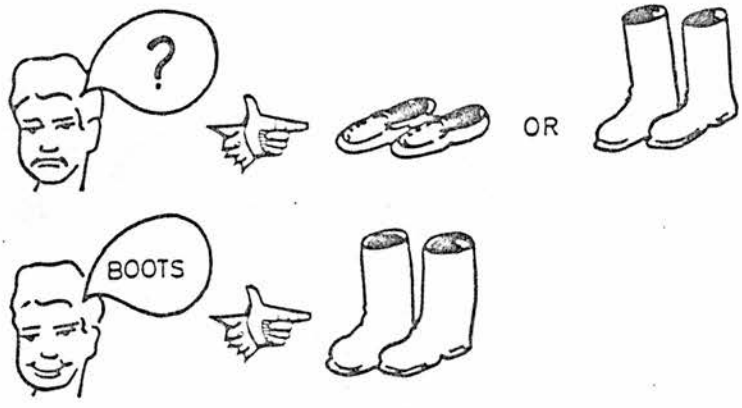
Finally, please ask each pupil to complete the short Pupil Feedback sheet. These should be collected from the class and retained by you, for discussion with your class if you wish (and in this instance, for the project research staff).

The Information Sheets for use with Activity B in Worksheet 2 are based on material from 'So You Want to Cut Down your Drinking' published by the Scottish Health Education Group.

Worksheet 3, Activity C, Parts 1 and 2, and Activity D are based on materials in 'Alcohol Education Syllabus 11-16, Year 2' published by TACADE.

Worksheet 5, Activity A is a modified version of the exercise 'Maurice the Martian', to be published by the Health Education Council.

Pupil Worksheet 1 - It's Your Choice



Activity A

Here is a list of choices you may sometimes have to make.

Subject	Which would you choose? (underline one)	What would you choose instead? (If you have not underlined one)
Example: Breakfast	Eggs or Kippers.	
a) Food	Beans or Hamburgers	
b) Drink	Lemonade or Milk	
c) Sport	Football or Rugby	
d) Sport	Swimming or Tennis	
e) Colour	Red or Green	
f) Travel	Bus or Train	
g) Chocolate	Mars or Marathon	
h) Music	Classical or Pop	

When you have finished this list, you will be able to compare what you have chosen with others in the class.

Acitivity B

Some choices are more difficult to make. Try these.

Subject	Which would you choose (underline one)
Travel	Thailand or Peru
Career	Orthotist or Psychiatrist
Car	Honda or Lada
Investment	Post Office Savings or Unit Trust
Power	Gas or Electricity
Drink	Beaujolais or Hock

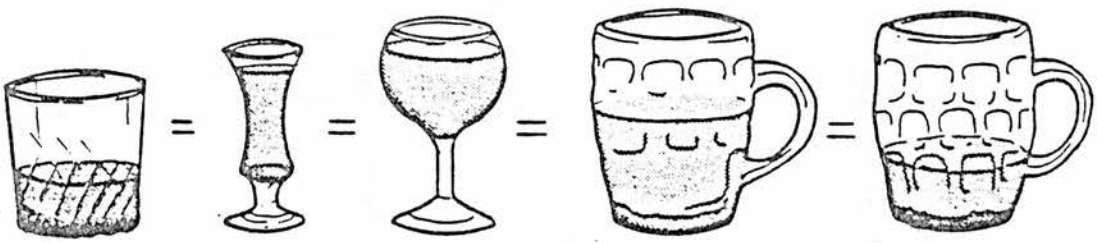
Why were the choices in the second list more difficult to make?

What could you do to make these choices easier?

Pupil Worksheet 2

Activity A - 'One Unit of Alcohol'

This picture shows drinks which have the SAME amount of alcohol in them. This amount is called ONE UNIT OF ALCOHOL.



Look at the picture above, and tick whether you agree, disagree or are not sure about the following:

	Agree	Disagree	Not Sure
1. A glass of wine is the same strength as half a pint of cider.			
2. ½ pint of strong beer is stronger than one single whisky.			
3. A glass of sherry is stronger than half a pint of beer.			
4. A glass of whisky is the same strength as a glass of sherry.			
5. A glass of whisky is stronger than half a pint of cider.			
6. One pint of beer is the same strength as a glass of wine.			

Pupil Worksheet 2

Activity B - 'Alcohol and your Body'

Only minutes after being swallowed, alcohol enters the bloodstream and reaches every part of the body. Certain things will slow down or speed up the rate at which alcohol is taken into the bloodstream, and this will affect how quickly different people begin to feel the effects of drinking.

Look at the diagram below. Some of the things listed beside the picture will influence how drinking alcohol affects the body. Some of them will have no influence. For each item on the list which you think will influence the effect alcohol has on the body, draw an arrow to the body.

Your Weight

Colour of your Eyes

When you last ate

Whether you are male or female

Size of your feet

How quickly the alcohol is drunk

Your age

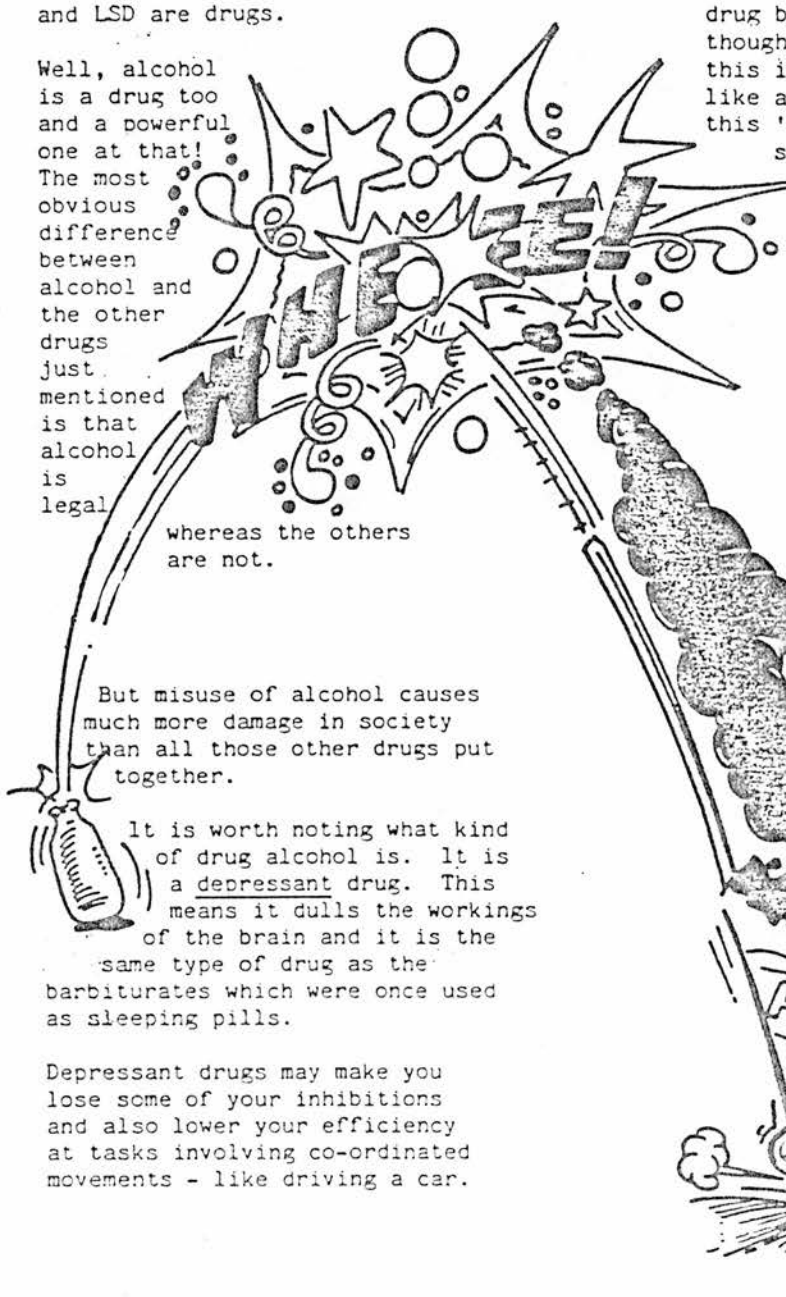
Colour of your hair.

Use the information sheet for Worksheet 2 to help you.

ALCOHOL IS A DRUG

Yes, that's right! We all know that heroin, cocaine, cannabis and LSD are drugs.

Well, alcohol is a drug too and a powerful one at that! The most obvious difference between alcohol and the other drugs just mentioned is that alcohol is legal whereas the others are not.



But misuse of alcohol causes much more damage in society than all those other drugs put together.

It is worth noting what kind of drug alcohol is. It is a depressant drug. This means it dulls the workings of the brain and it is the same type of drug as the barbiturates which were once used as sleeping pills.

Depressant drugs may make you lose some of your inhibitions and also lower your efficiency at tasks involving co-ordinated movements - like driving a car.

You may be surprised to learn that alcohol is a depressant drug because you have always thought of it as a stimulant. this is because it may feel like a stimulant at first, but this 'stimulant' effect is only shortlived, as anyone who drinks alcohol knows.

By the way, mixing alcohol with other drugs can be very dangerous and is definitely not to be recommended.

Fact Sheet for use with Pupil Worksheet 2.

How does alcohol affect your body?

The effect alcohol has on you depends on the amount of alcohol in your blood.

After drinking, alcohol is also present in your breath, and modern police roadside tests for drunken driving - the BREATHALYSER - measure the concentration of alcohol in your breath which is closely related to the amount of alcohol in your blood.

However, the amount of alcohol in your bloodstream doesn't just depend on how much you drink, but on a number of other things. The most important are:

1. YOUR WEIGHT. The same amount of alcohol has a greater effect on a light person than on a heavy person.

2. YOUR SEX. The same amount of alcohol has a greater effect on a woman compared to a man. There are two main reasons for this:

a) women are generally smaller than men,

b) women have a lower proportion of water in their bodies to dilute the alcohol in the bloodstream.

3. HOW QUICKLY YOU DRINK THE ALCOHOL. The same amount of alcohol, if drunk quickly, will have a greater effect on you. This is because you are drinking the alcohol much faster than your liver can remove it. Therefore a greater amount of alcohol builds up in your bloodstream.

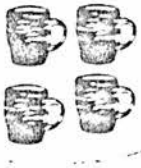
4. EATING FOOD. If you have food in your stomach you will slow down the rate at which alcohol enters your blood. This will to some extent reduce the effect of the alcohol.

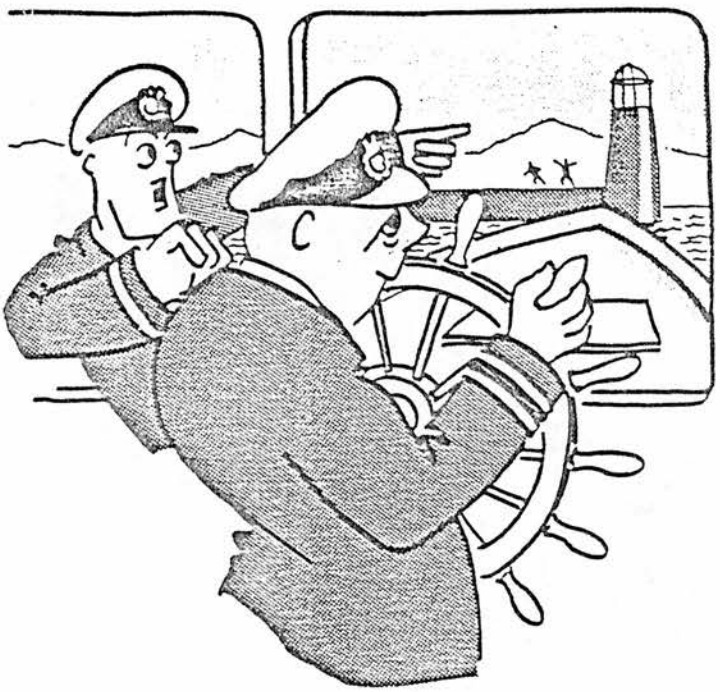
5. YOUR AGE. Young people are more likely than adults to become ill from drinking the same amount of alcohol.

Pupil Worksheet 2

Activity C

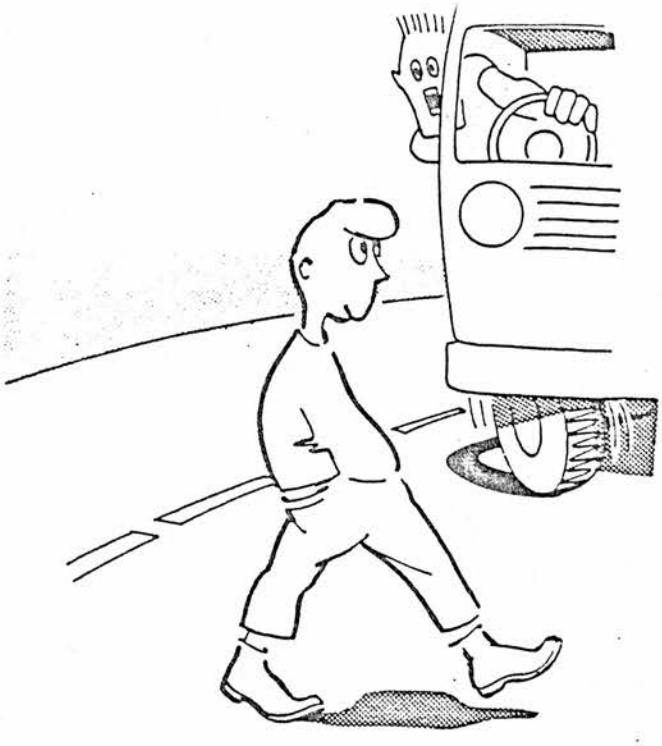
Although alcohol is taken into the bloodstream quickly, it remains in the body after drinking has stopped.
One UNIT of alcohol (remember ? - ½ pint of beer or cider or 1 glass of whisky) takes roughly 1 HOUR to leave the body.
The picture below gives an approximate guide to the lasting effects of increasing amounts of alcohol. (These estimates are for an average adult).

Alcoholic Drinks	Time taken by body to get rid of alcohol	How you Feel	How you Behave	Cartoon No
1 UNIT - 	1 hour			
2 UNITS - 	2 hours	Begin to feel relaxed	judgement may become less accurate, increased risk of accident (e.g. being knocked down when crossing a road)	
4 UNITS - 	4 hours	Feeling of well-being	Some loss of self-control and inhibitions Reactions become slower.	
6 UNITS - 	6 hours	Talkative, excited, moody	Loss of good judgement (especially dangerous for cyclists and drivers)	
MORE THAN 6 UNITS	8 hours	Confused and silly	Slurred speech; lack of co-ordination	
		drunk	staggering, double vision, memory loss.	



1

2



3

4

5

Pupil Worksheet 3.

Activity A - Stop and Think

1.

Situation	Importance of Decision to be made	
	My Order	The Group's Order
a) Buying a car	1.	1.
b) Spending pocket money	2.	2.
c) Choosing a boy/girl friend	3.	3.
d) Going swimming	4.	4.
e) Choosing a career	5.	5.
f) Choosing an alcoholic drink	6.	6.
g) Crossing the road	7.	7.
h) Choosing what to wear	8.	8.
i) Buying a present	9.	9.

2. a) Was your order of importance the same as that of your group? If not, did anyone in your group try to persuade you to change your order?

b) Did the groups agree on an order of importance?

c) Would you now like to change your mind about your order of importance? Note down the changes you want to make, and why you want to make them.

d) Which of these choices do you think might have a long lasting effect on your life?

Pupil Worksheet 3

Activity B

'At the Disco'

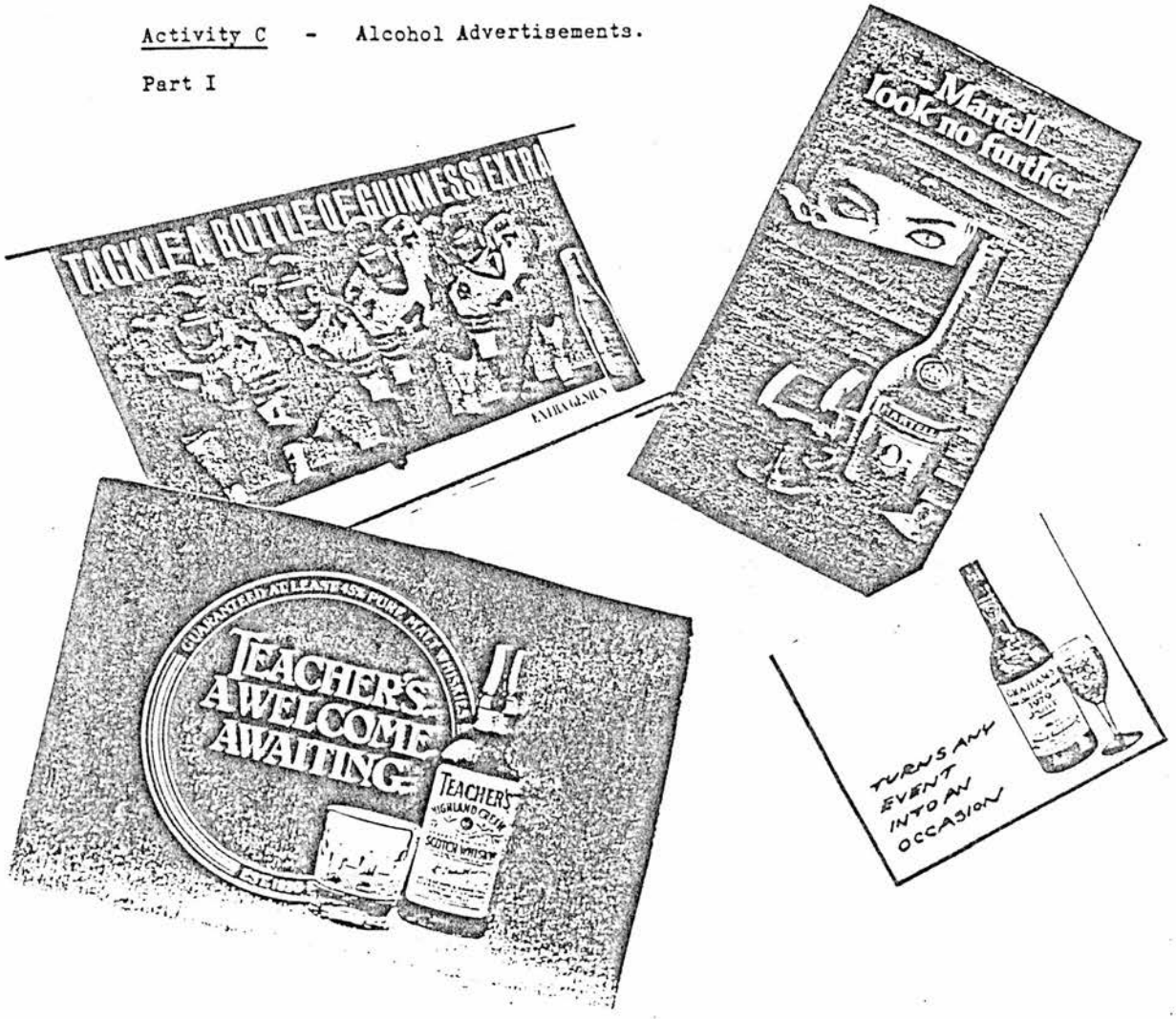
Questions (to be discussed in the group).

1. What do you think is happening in the picture?
2. Why are the teenagers drinking outside the disco?
3. Where do you think they got the alcoholic drinks from?
4. Why do you think they went to drink alcohol?
5. How may drinking affect their behaviour when they go inside?
6. What will the other teenagers in the disco think of them?
7. What might happen when they go home?

Pupil Worksheet 3

Activity C - Alcohol Advertisements.

Part I



Collage of Alcohol Adverts (photo-reduced)

Look carefully at the advertisements and try to understand what they are saying. Look at them in the way a detective or scientist might look for clues.

Tackle the following questions :
In the brackets are some extra questions which should help you to answer the main ones.

1. What can you say about the people in the adverts?
   For example, what age? what appearance? etc.
   (Do you find them attractive?).

2. What kind of words are used? For example, are the words simple or complicated? etc. (Do you clearly understand them?)

3. Can you say something about the "message" contained in the picture?
   (What did you think of when you looked hard at the picture?).

4. What other "things" (if any) appear in the picture? For example, are they attractive things? Valuable? etc. (Would you like to possess them?).

Pupil Worksheet 3

Activity C - Another Picture of Alcohol

Part 2.

Read the press cuttings above and think about the following questions:

1. What images of alcohol do you find in these statements?
2. How do these images compare to the picture of alcohol presented in the advertisements you looked at?
3. Did the advertisements tell the whole story about alcohol? If not, why do you think this is?

Pupil Worksheet 3

Activity D - 'What Will Kanay Do?'

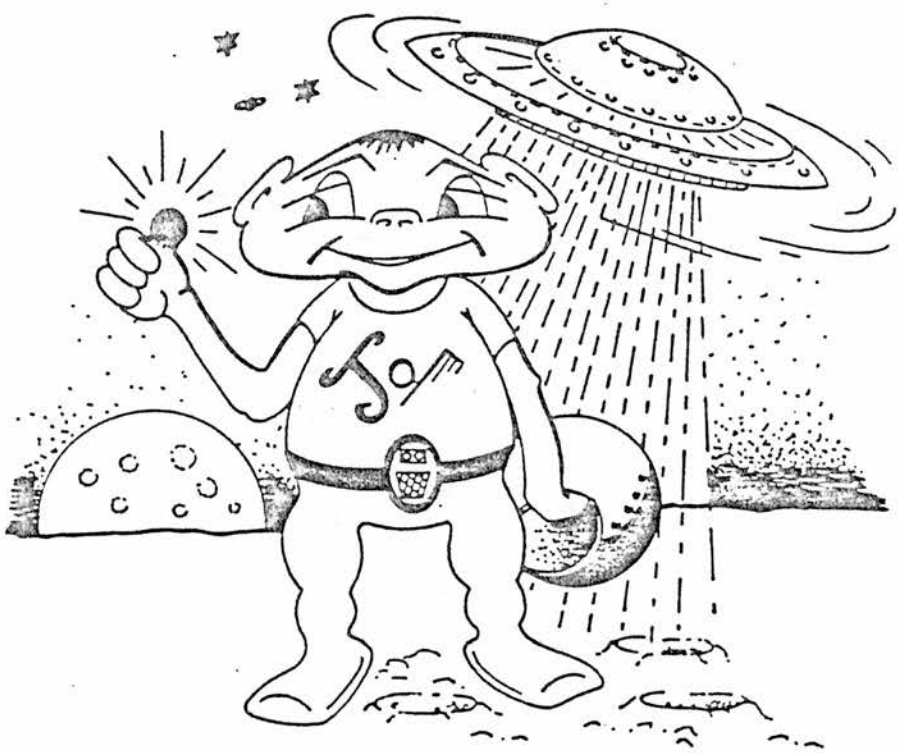
The parents of Kanay (aged 14) are out shopping, which usually takes them about two hours. Meanwhile some of his friends call at his home to listen to records and play cards. Before long one of the friends lights up a cigarette. Kanay wishes this hadn't happened as his parents are sure to smell the smoke and both strongly dislike smoking.

Noticing some drinks on a side table, one of the friends pretends to offer everyone a drink. Someone, Kanay was not sure exactly who, suggests that they all actually have a drink. There is a short silence and all but one of the five friends present begin to back up the suggestion that Kanay should pour out the drinks.

All eyes are on Kanay. What will he do?

Pupil Worksheet 4.

Activity A - Jo from Jupiter.



The FOUR most important things to tell Jo are:

1.

2.

3.

4.

Now here is a short quiz about alcohol.
Read the following statements. If you think the statement is true, put a tick in the True column. If you think it is false, put a tick in the False column. If you are not very sure, put a tick in the Don't Know column.

		True	False	Don't Know
(a)	Alcohol makes you more alert.			
(b)	A single whisky (as measured in a pub) is stronger than a pint of beer.			
(c)	Alcohol is a drug.			
(d)	The same amount of alcohol affects males and females in the same way.			
(e)	Eating along with drinking will slow down the effects of alcohol.			
(f)	Adding soft drinks such as lemonade or fruit juice to alcoholic drinks helps the alcohol to leave the body more quickly.			
(g)	It is possible to drink small amounts of alcohol without harming health.			
(h)	Giving alcohol to accident victims can be dangerous.			
(i)	All lagers and ciders contain roughly the same amount of alcohol.			
(j)	Drinking only one pint of beer can affect driving skills and the chance of having an accident.			
(k)	It can be dangerous to drink alcohol if you have taken tablets or medicines.			
(l)	The human body gets rid of two pints of beer in one hour.			
(m)	Alcohol harms less people in Britain than illegal drugs such as heroin and cocaine.			
(n)	A glass of table wine contains much more alcohol than half a pint of cider.			
(o)	Drinking spirits is more likely to lead to problems with alcohol than drinking cider.			

APPENDIX 4a. Teachers' Feedback Form for Pilot Study

FEEDBACK FORM FOR TEACHERS

On the final two pages you will find the feedback form for teachers.

We would like your HONEST opinion about this teaching package, so please don't be embarrassed to say exactly what you think!

		Worksheet 1		Worksheet 2			Worksheet 3				Worksheet 4	
		Activity A	Activity B	Activity A	Activity B	Activity C	Activity A	Activity B	Activity C	Activity D	Activity A	Activity B
Did you follow the suggested instructions closely? (tick one)	Yes											
	No											
If not, how did your instructions differ? (describe briefly)												
How long did you spend on this activity?												
Was there any aspect of this activity which your pupils found difficult?	Yes											
	No											
If YES, could you describe it briefly?												
Have you any other comments?												

Feedback form for teachers - Part 2.

(These questions relate to the package as a whole).

1. Were you in general agreement with the overall rationale of the package? Yes ___ No ___

2. The pupil objectives for each activity are detailed in the teacher's notes.
On the basis of your experience of using the package, do you think any of these objectives are unrealistic? Yes ___ No ___

3. If you answered YES to Q.2, which objectives are these?
Can you indicate briefly why you think they are unrealistic?

_____

_____

_____

4. Was there anything in the package which you did not like having to teach? Yes ___ No ___
If YES, can you describe briefly what this was, and why you didn't like teaching it?

_____

_____

5. Was there anything in the package which you felt was not suitable for this particular group of children? Yes ___ No ___

If YES, can you describe briefly what this was and why you felt it was unsuitable?

_____

_____

6. There is considerable emphasis on small group work and discussion.
Did you have any problems with this? Yes ___ No ___

If YES, describe these briefly _____

_____

_____

Finally, please indicate below any modifications to the package that you would recommend.

_____

_____

_____

_____

_____

Any other comments.

_____

_____

_____

_____

APPENDIX 4b. Pupils' Feedback Form for Pilot Study

PUPIL FEEDBACK SHEET

Now that you have reached the end of this alcohol education programme, you may find it interesting to think back to all the activities you have done.

To help you do this try and note down some answers to the following questions.

1. Which Activity did you like most? _____

   (write in) _____

   _____

2. Why did you think this was the best activity ? _____

   (write in why) _____

   _____

3. Which activity did you like least? _____

   (write in) _____

   _____

4. Why did you not like this activity ? _____

   (write in) _____

   _____

5. Do you think you learned anything that you didn't already know?

Answer YES or NO _____

6. If you answered YES, can you note down something you have learned.

(write in)

_____

_____

Please write down here anything else you would like to say about the alcohol education programme you have just completed in school.

_____

_____

_____

_____

APPENDIX 5 Education Materials Used in Main Study

ALCOHOL EDUCATION IN SCHOOL

MANUAL FOR TEACHERS

ALCOHOL RESEARCH GROUP
UNIVERSITY DEPARTMENT OF PSYCHIATRY
ROYAL EDINBURGH HOSPITAL
MORNINGSIDE PARK
EDINBURGH EH10 5HF

INTRODUCTION

IT IS IMPORTANT THAT YOU READ THIS MANUAL BEFORE TEACHING THE MATERIALS. This will give you a flavour of the content of the package, and an overall view of the general message intended.

This alcohol education package forms part of an evaluation study being conducted by the Alcohol Research Group at Edinburgh University. The materials are suitable for 12 - 13 year old children, and emphasise participatory learning activities. The complete package has been designed for use either as a free- standing module of approximately four hours' total teaching time, or ultimately as part of a broader social/health education programme.

Overall, the package has two principal aims:

1) To provide a framework which will allow pupils to think about alcohol in a way which is relevant to their own immediate and perceived future experience.

2) To help pupils begin to develop the necessary skills to make reasoned choices about alcohol.

In a broader sense, it is hoped that this package will enable pupils to build up a store of information and potential skills which can be extended beyond the context of alcohol.

BACKGROUND

The introduction of alcohol education within the school curriculum to this age group may be regarded as a contentious issue. Indeed you may already be wondering :

1) Why focus on alcohol, especially in isolation from illicit drugs?
   and
2) Why start with this age group, when the legal minimum age for drinking is eighteen?

In answer to the first question, it must be appreciated that the goal of this alcohol education package is rather different from that of a 'drug education' package. Consumption of illicit drugs, such as cannabis or heroin, is, by definition, against the law. Education in this context must therefore have an overall objective of teaching pupils to say no, always. Alcohol on the other hand is a legal drug, and one which is commonly consumed - only about 10% of the adult population in Britain are total abstainers. It would therefore be unrealistic (whatever one's personal beliefs about alcohol) to pursue an identical educational goal.

The aim of this package is not to teach youngsters that they must NEVER drink alcohol. Instead it is structured to help them begin to acquire the information and skills necessary to help them make responsible decisions about their own alcohol related behaviour (which may of course include saying no).

And why this age group? There is considerable evidence to suggest that by age 13, the majority of children have had some experience, albeit mostly very limited, of drinking alcohol. The topic of alcohol then is by no means outwith the experience of the majority of this age group.

CONTENT AND METHOD

The content of the package is subdivided into various activities, which are reproduced in individual pupil work books. An average time of approximately 25 minutes should be allowed for each activity. Obviously some of these will take longer than others, and there is ample opportunity for you to introduce flexibility to fit in with your specific requirements. There are four pupil worksheets, subdivided into activities as shown below:

Worksheet 1

Activity A - It's your choice.
Activity B - More Difficult Choices.

Worksheet 2

Activity A - One Unit of Alcohol.
Activity B - Alcohol and Your Body
Activity C - Alcohol and Behaviour

Worksheet 3

Activity A - At the Disco.
Activity B - Part 1: Alcohol Advertisements
Part 2: Another Picture of Alcohol
Activity C - What Will Kanay Do?

Worksheet 4

Activity A - What do you know ?

The remainder of the manual provides detailed information for each activity. This covers learning outcomes, basic methodology and suggested guidelines for administration. A complete set of pupil worksheets is included, with answers provided where appropriate.

Ultimately it is envisaged that the package will be available to teachers to use in any way they choose. However, for the present purpose of systematic evaluation, it is essential that the teaching of the package is as standardised as realistically possible. This means that, at this stage, it is most important that you adhere closely to the suggested guidelines for each activity. But please bear in mind that this prescriptive approach is required only for the experimental stage. It is necessary simply to ensure that it is the content and process of the package that is evaluated, and not different teaching methods.

Finally, at the back of the manual, you will find attached a "Teachers' Feedback Form". Here you have the opportunity to note down your reactions to and comments about the package. And please be honest - it is your experience of the package which will help to shape the final product.

Notes for Pupil Worksheet 1.

The first Pupil Worksheet emphasises choice and decision making in a general context which is not specifically alcohol related.

Learning outcomes

Activity A	1) Pupils realise that in everyday life they are constantly making choices. 2) Pupils realise the possibility of alternatives to the choices, including choosing nothing.
Activity B	3) Pupils realise the desirability of acquiring accurate information before choosing.

METHOD: Pupil workbooks should be opened at Worksheet 1. Each activity should be completed individually, followed by a class discussion.

Activity A - 'It's Your Choice'

Explain what has to be done, and work through the example. When the majority have finished activity A, compare some of the choices round the class. It is quite possible that some members of the class will openly disapprove of the choice made by others. Such a reaction should be used to introduce the idea of each individual's right to choose. Pupils should also be encouraged to regard 'nothing' as an alternative to the choices provided.

Activity B - 'More Difficult Choices'

Pupils should try to work through this list just as they did in Activity A; some time should be allowed to think about the two questions at the end. A class discussion should then be structured round these questions, emphasising the need for accurate information in order to make a sensible choice.

Notes for Pupil Worksheet 2

Learning Outcomes:

Pupils increase their knowledge about

1) the equivalence between various alcoholic drinks
   - Activity A
2) factors which influence the effects of alcohol on the body
   - Activity B
3) the general effects of alcohol over time on individual behaviour, with special emphasis on the implications for alcohol related accidents
   - Activity C.

METHOD: Pupils should turn to Worksheet 2. Each activity should be introduced briefly by the teacher, and then completed individually (or in small groups), followed by a class discussion.

Suggested Introduction to Worksheet 2. "Last time we saw that to make a good choice you need to know something about the choices open to you. Let's think now about making choices in one particular area. You probably all know some people who choose to drink beer, some who prefer to drink whisky, and some who choose not to drink alcohol at all. Why do you think so many people do choose to drink alcohol?"

Encourage the class to suggest some reasons, and note these down. If prompting is needed, suggest they consider such things as 'what does alcohol do for people - how does it make them feel/behave?' You will probably end up with a short list of reasons such as 'alcohol makes people feel more relaxed, or alert, or confident with other people' etc..

Activity A - 'One Unit of Alcohol'

Suggested Introduction : "Now let's see if some of these reasons fit in with what is known about alcohol and its effects. The first kind of information we're going to look at is the strength of different alcoholic drinks.

People don't ask for a drink of alcohol - what do they usually ask for?" (Allow class to provide examples - sherry, lager, cider, whisky ---- etc.). "But a glass of whisky is always much smaller than a glass of beer, or even a glass of wine. This has to do with the amount of alcohol that each of these drinks contains".

Then direct pupils to Activity A on Worksheet 2: Many pupils would appreciate some guidance with the interpretation of the diagram, as they may find this type of equation confusing. It would be helpful to introduce brand names, and any local terminology which you feel would make the activity more meaningful for your group. For instance point out that Martini is similar in strength to sherry, and refer to local measures such as the Scottish 'dram' of whisky. Note that the table at the end of this activity should be completed individually. When most of the class appear to have filled it in, work through the correct answers with them.

Activity B - 'Alcohol and your Body'

This activity can be completed individually, in small groups or as a whole class. Direct the class to Activity B, and read through the introductory text with them if you feel there are pupils who require this guidance. [N.B. - the arrows are inserted only in the teacher's copy of this activity]. Remind the class they will need to use the Information Sheet for Worksheet 2 to find the answers. When the majority have finished, correct this 'matching' exercise with the class, allowing questions and discussion as appropriate.

Activity C - 'Alcohol and Behaviour'

This exercise should be completed as a class activity, with a few minutes devoted to individual completion of the multiple choice questions. Encourage discussion of the answers, including those options not ticked. It is important to acknowledge the point that many youngsters may regard

some of the activities listed as easier to do well after two units, without posing a greater risk of accident.

Notes for Pupil Worksheet 3

Worksheet 3 concentrates on the nature of social influences on decisions concerning alcohol. The areas to be examined here are peer group pressure, advertising and the media.

Learning Outcomes:

1. Pupils realise the influence of other people on teenage drinking behaviour - Activity A.

2. Pupils realise the contrasting nature of public images of alcohol in advertisements and the media - Activity B.

The final activity allows pupils to apply some of the ideas in Worksheet 3 to a fictitious case-study. It is an open-ended exercise, allowing pupils to explore social influences on alcohol related decisions from their own perspective and experience.

METHOD : The materials for each activity should be worked through as suggested below. [The emphasis is on small group work followed by class discussion.]

Activity A - 'At the Disco'

Divide the class into small groups.

Suggested Introduction : "Look at the picture and discuss it amongst yourselves for a few minutes. Jot down some answers to the questions".

Bring the groups together, comparing answers as a stimulus to class discussion. The points emerging should include peer group pressure, legal restrictions on under-age drinking and parental disapproval (question 7).

Activity B

Part 1 - Alcohol Advertisements

This activity should be conducted as a whole class. Unfortunately, because of the cost of colour reproduction, it has only been possible to provide one set of stimulus material for each class, rather than for each pupil. This comprises a set of coloured prints of alcohol advertisements, but could be supplemented from various sources. (For example, you could use a video of some alcohol advertisements on TV, or you could ask the pupils to cut out and bring in some alcohol advertisements from home).

Whatever stimulus material you use, firstly explain to the class that the task is to look for the messages in the adverts.

Work through the questions with the class, making frequent reference to

specific adverts which illustrate the point. Use the pupils' answers to explore some of the techniques used by advertisers to sell their product. For instance, in question 1 you could discuss how the use of famous, handsome or apparently sociable people implies that if you were to use that product, you could become like them.

In question 2, you could discuss the use of language - e.g. superlatives, 'positive' words etc. - in creating a desirable product.

In question 3, try to sum up by considering the argument that the advertisements show only the beneficial aspects of the product. Is there any aspect not presented by the advertiser?
Then move on to Activity B Part 2.

Activity B

Part 2 - Another Picture of Alcohol

Ask pupils to read the selection of press cuttings about alcohol, and to think for a short time about the questions on the worksheet. Then bring the class together for a discussion structured round their answers.

Parts 1 and 2 of Activity B should be concluded by re-iterating the main points raised.

Suggested Conclusion: "We have seen how different messages about alcohol are received from different sources. The two different sources we have looked at are advertising and news coverage. Can you think of any other sources?"

Optional home-based activity: A good example for broadening the discussion is the portrayal of alcohol consumption in television programmes. For example, you could ask the class how often they see "JR" pouring himself a whisky in "Dallas". Then suggest that the next time they watch a programme of this kind, they think about the image of alcohol coming from the programme. Explain that "to do this, it is necessary to ask WHERE is the person having the drink, and WHY; how does he/she seem to FEEL or BEHAVE after the drink? Discuss this with your family, and see if the image they receive is the same as yours. Note down your conclusions, and discuss these with your friends and at school."

Activity C - 'What Will Kanay Do?'

Pupils should begin this activity working individually. They should read the brief story, and be encouraged to try to put themselves in Kanay's position.

Then ask them to write down "If I were Kanay I would .....". Explain that they have to complete the sentence, stressing that the word is WOULD and not SHOULD, i.e. what do they think Kanay would do next.

Combine the pupils into small groups, to compare their ideas on what Kanay

would do next. Then ask them to note down, as a group, what they think Kanay SHOULD do. Feed in prompts if necessary to aid group discussion. For example :

Should he give in?
Should he appeal to a particularly close friend?
Should he admit respect for the wishes of his parents?
Should he ask them all to leave?

Bring the groups together for class discussion. Allow the discussion to be shaped by the youngsters' own ideas, but ultimately try to structure it around some of the following points:

Did all groups agree on what Kanay should do?
Were the proposed courses of action realistic?
Can the pupils decide whether Kanay 'won' or 'lost' the situation?

Optional Role - Play Exercise

As an alternative or extension to the above exercises on Activity C, pupils could explore possible solutions to Kanay's problem through role-play.

Working in small groups, ask pupils to re-read the short story, and to decide on a possible ending. Stress that the idea is to look for ways in which Kanay could deal with the situation if it should arise again.

Bring the groups together and invite feedback from them on what they discovered through their role play.

Suggested Conclusion :

Worksheet 3 includes a variety of activities, and it would be helpful to recap briefly. This can be done using the learning outcomes listed at the beginning of this worksheet.

Notes for Pupil Worksheet 4

Learning outcomes

Activity A

1) Pupils recap and consolidate on what they have learned from the package.

2) Pupils assess their own knowledge of alcohol.

Activity A - 'What do you know?'

Divide the class into teams.

Read through the instructions with the class, and then allow each team time to fill in their answers.

Alternatively, the quiz could be completed as a class, using an overhead projector, with the response of each team being noted in a different colour. In either case, actively encourage reference to the workbooks, especially the information sheets.

When the quiz has been completed, go over the correct answers, encouraging discussion as it arises.

Finally, please ask each pupil to complete the short Pupil Feedback sheet. These should be collected from the class and retained by you, for discussion with your class.

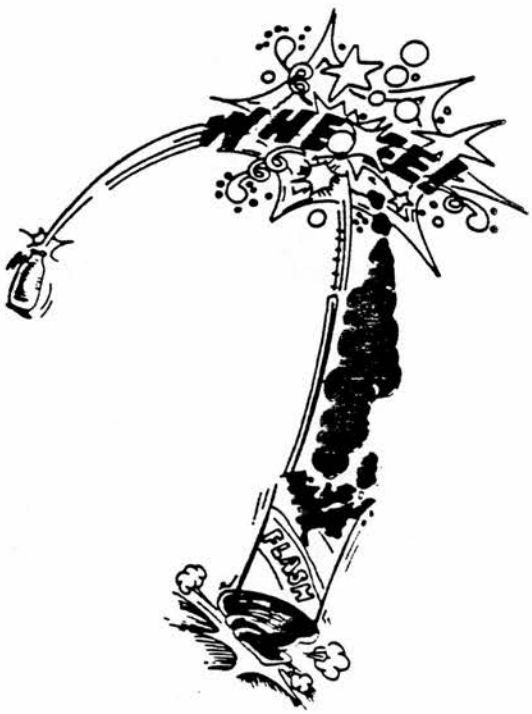
The Information Sheets for use with Activity B in Worksheet 2 are based on material from 'So You Want to Cut Down your Drinking' published by the Scottish Health Education Group.

Worksheet 3, Activity B, Parts 1 and 2, and Activity C are based on materials in 'Alcohol Education Syllabus 11-16, Year 2' published by TACADE.

The drink/driving statistics on Worksheet 3 Activity C are quoted from Dunbar, J. (1985) The Quiet Massacre (Occasional Paper No. 7, Institute of Alcohol Studies, London).

Gellisse Bagnall
March 1987.

University of Edinburgh

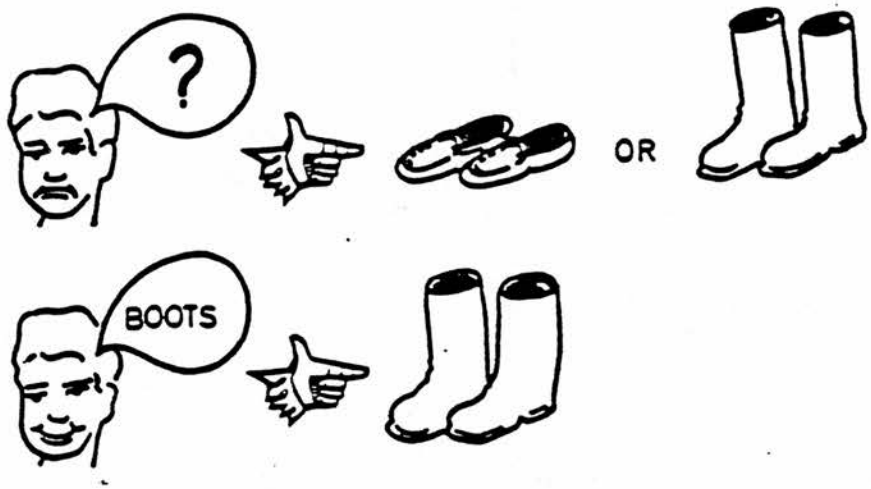


ALCOHOL EDUCATION

Class

Name

Worksheet 1 - It's Your Choice



Activity A

Here is a list of choices you may sometimes have to make.

Subject	Which would you choose? (underline one)	What would you choose instead? (If you have not underlined one)
Example: Breakfast	Eggs or Kippers.	
a) Food	Beans or Hamburgers	
b) Drink	Lemonade or Milk	
c) Sport	Football or Rugby	
d) Sport	Swimming or Tennis	
e) Colour	Red or Green	
f) Travel	Bus or Train	
g) Chocolate	Mars or Marathon	
h) Music	Classical or Pop	

When you have finished this list, you will be able to compare what you have chosen with others in the class.

Acitivity B

Some choices are more difficult to make. Try these.

Subject	Which would you choose (underline one)
Travel	Thailand or Peru
Career	Teacher or Psychiatrist
Car	Chevrolet or Lada
Investment	Post Office Savings or Unit Trust
Drink	Beaujolais or Cider

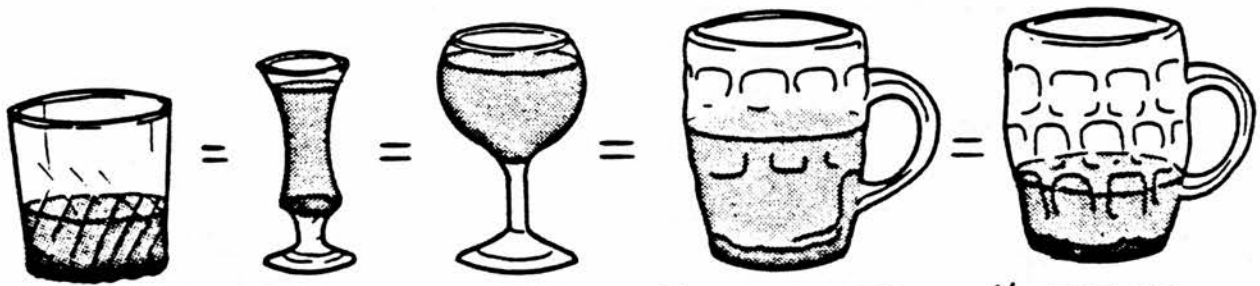
Why were the choices in the second list more difficult to make?

What could you do to make these choices easier?

Worksheet 2

Activity A - 'One Unit of Alcohol'

This picture shows drinks which have the SAME amount of alcohol in them. This amount is called ONE UNIT OF ALCOHOL.



Look at the picture above, and tick whether you think the following are true or false, or you are not sure.

	True	False	Not Sure
1. One glass of wine is the same strength as half a pint of cider.			
2. 1/2pint of strong lager is stronger than one single whisky.			
3. One glass of sherry is stronger than half a pint of beer.			
4. One single whisky is the same strength as a glass of sherry.			
5. One single whisky is stronger than half a pint of cider.			
6. One pint of beer is the same strength as one glass of wine.			

FACT SHEET I
(for use with 'Alcohol and your Body')

How does alcohol affect your body?

The effect alcohol has on you depends on the amount of alcohol in your blood.

After drinking, alcohol is also present in your breath, and modern police roadside tests for drunken driving - the BREATHALYSER - measure the concentration of alcohol in your breath. This is closely related to the amount of alcohol in your blood.

However, the amount of alcohol in your bloodstream doesn't just depend on how much you drink, but on a number of other things. Some of these are:

1. YOUR WEIGHT. The same amount of alcohol has a greater effect on a light person than on a heavy person. But this does not mean fat people never get drunk!

2. YOUR SEX. The same amount of alcohol has a greater effect on a woman compared to a man. There are two main reasons for this:

a) women are generally smaller than men,

b) women have a lower proportion of water in their bodies to dilute the alcohol in the bloodstream.

3. HOW QUICKLY YOU DRINK THE ALCOHOL. The same amount of alcohol, if drunk quickly, will have a greater effect on you. This is because you are drinking the alcohol much faster than your liver can remove it. Therefore a greater amount of alcohol builds up in your bloodstream.

4. EATING FOOD. If you have food in your stomach you will slow down the rate at which alcohol enters your blood. This will to some extent reduce the effect of the alcohol.

5. YOUR AGE. Young people are more likely than adults to feel sick and unwell as a result of drinking the same amount of alcohol. This is partly because they are smaller than adults. It is also partly because their bodies are less used to alcohol.

Worksheet 2

Activity C - Alcohol and Behaviour

Note - at two points in this activity you will find a blank space where there should be a picture. At the end of the worksheet you will find two pictures. When you have been through the worksheet, decide which picture should be in each blank space.

Although alcohol is taken into the bloodstream quickly, it remains in the body after drinking has stopped.
ONE UNIT of alcohol (remember - half a pint of beer or cider) takes roughly ONE HOUR to leave the body. (This time is for an average adult; it would take longer for a smaller person).

The effect is shown below:

Alcoholic Drinks	Approximate time body takes to get rid of the alcohol	How You Feel
1 UNIT - 	1 HOUR	
2 UNITS - 	2 HOURS	Begin to feel relaxed. BUT judgement may become less accurate.

So even after 2 UNITS of alcohol, some activities present a greater risk of accident.

Below is a list of activities. Tick any which you think could not be done so well after two or three units of alcohol:

a)	Riding a bicycle	a)
b)	Chatting to friends	b)
c)	Climbing trees	c)
d)	Swimming	d)
e)	Meeting people at a party	e)
f)	Dancing at a disco	f)
g)	Crossing a road	g)

What picture would you put here?

After 2 Units of alcohol, your judgement may be less accurate.

As you have probably guessed, the more alcohol people drink, the greater will be its effect on their body and on their behaviour. And the longer these effects will last after drinking has stopped.

Most of us have at some time laughed at the image of a drunk person, in real life or as acted by a comedian. This image is usually characterised by slurred speech, lack of co-ordination, and generally confused behaviour.

Which picture would you put here?

Popular image of someone who has drunk a lot of alcohol - poor co-ordination and loss of judgement.

But this sometimes funny side of alcohol may make us forget the dangers. As you know, the more alcohol a person drinks, the less able that person will be to judge speed and distance, to co-ordinate movements and to react quickly. Can you see from this the danger of drinking alcohol and riding a motor-bike or driving a car? And this danger is real. In the United Kingdom, roughly 1200 people are killed every year as a result of drinking and driving. Half of these, 600 people every year, are in their teens or twenties.

Activity A

'At the Disco'

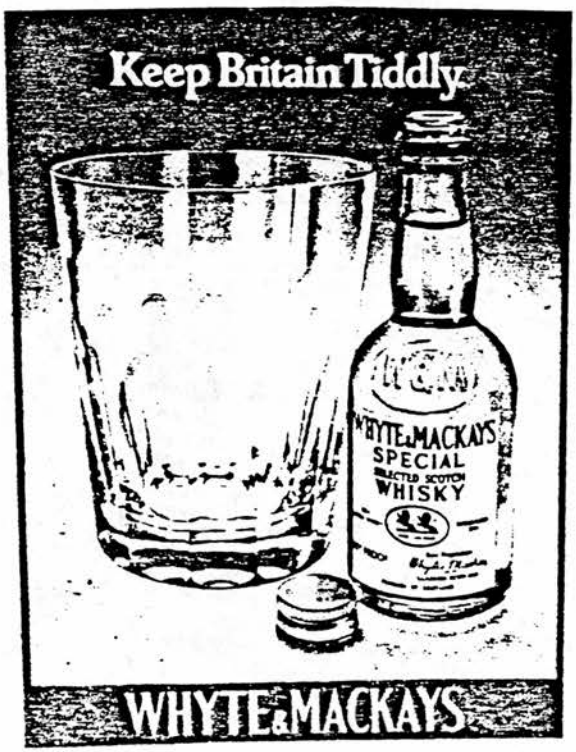
Questions (to be discussed in the group).

1. What do you think is happening in the picture?
2. Why are the teenagers drinking outside the disco?
3. Where do you think they got the alcoholic drinks from?
4. Why do you think they want to drink alcohol?
5. How may drinking affect their behaviour when they go inside?
6. What will the other teenagers in the disco think of them?
7. What might happen when they go home?

Worksheet 3

Activity B - Alcohol Advertisements.

Part I



Look carefully at the advertisements and try to understand what they are saying. What message do you think comes across?

Tackle the following questions :
In the brackets are some extra questions which should help you to answer the main ones.

1. What can you say about the people in the adverts?
   For example, what age? what appearance? etc.
   (Do you find them attractive?).

2. What kind of words are used? For example, are the words simple or complicated? etc. (Do you clearly understand them?)

3. Can you say something about the "message" contained in the picture? (What did you think of when you looked hard at the picture?).

4. What other "things" (if any) appear in the picture? For example, are they attractive things? Valuable? etc. (Would you like to possess them?).

Activity B - Another Picture of Alcohol

Part 2.

Read the press cuttings above and think about the following questions:

1. What images of alcohol do you find in these statements?
2. How do these images compare to the picture of alcohol presented in the advertisements you looked at?
3. Did the advertisements tell the whole story about alcohol? If not, why do you think this is?

Activity C - 'What Will Kanay Do?'

Kanay is 14. His parents are out shopping, which usually takes them about two hours. Meanwhile some of his friends call at his home to listen to records and play cards. Before long one of the friends lights up a cigarette. Kanay wishes this hadn't happened as his parents are sure to smell the smoke and both strongly dislike smoking.

Noticing some drinks on a side table, one of the friends pretends to offer everyone a drink. Then another friend suggests that they all actually have a drink. There is a short silence and all but one of the five friends present begin to back up the suggestion that Kanay should pour out the drinks.

All eyes are on Kanay. What will he do?

Worksheet 4.

Activity A - 'What Do You Know?'

Now here is a short quiz about alcohol.

Read the following statements. If you think the statement is true, put a tick in the True column. If you think it is false, put a tick in the False column. If you are not very sure, put a tick in the Don't Know column.

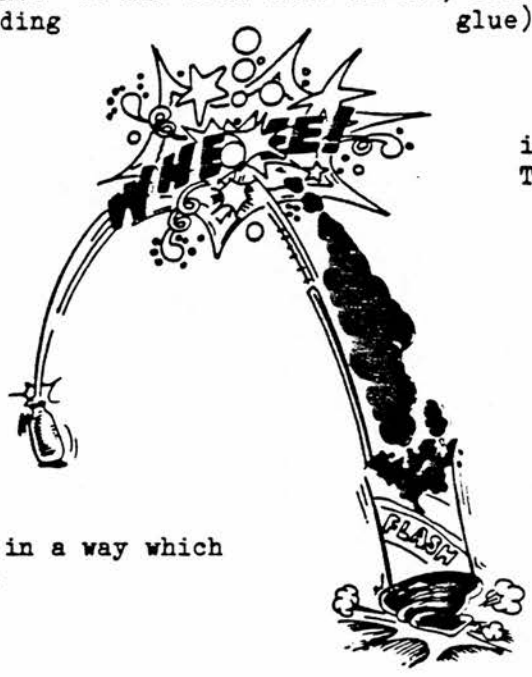
		True	False	Don't Know
(a)	Alcohol makes you more alert.		✓	
(b)	A single whisky (as measured in a pub) is stronger than a pint of beer.		✓	
(c)	Alcohol is a drug.	✓		
(d)	The same amount of alcohol affects males and females in the same way.		✓	
(e)	Eating along with drinking will slow down the effects of alcohol.	✓		
(f)	Adding soft drinks such as lemonade or fruit juice to alcoholic drinks helps the alcohol to leave the body more quickly.		✓	
(g)	It is possible to drink small amounts of alcohol without harming health.	✓		
(h)	Giving alcohol to accident victims can be dangerous.	✓		
(i)	All lagers and ciders contain roughly the same amount of alcohol.		✓	
(j)	Drinking only one pint of beer can affect driving skills and the chance of having an accident.	✓		
(k)	It can be dangerous to drink alcohol if you have taken tablets or medicines.	✓		
(l)	The human body gets rid of two pints of beer in one hour.		✓	
(m)	Alcohol harms less people in Britain than illegal drugs such as heroin and cocaine.		✓	
(n)	A glass of table wine contains much more alcohol than half a pint of cider.		✓	
(o)	Drinking spirits is more likely to lead to problems with alcohol than drinking cider.		✓	

USE THE FACT SHEETS AND ACTIVITIES TO LOOK FOR THE ANSWERS.

FACT SHEET II

ALCOHOL IS A DRUG

Yes, that's right. We all know that heroin, cocaine, cannabis, LSD and solvents (including glue) are drugs.



Well, alcohol is a drug too, and a powerful one at that! The most obvious difference between alcohol and the other drugs mentioned is that alcohol is legal wheras the others are not.

But misuse of alcohol causes more damage in society than all these other drugs put together. And when alcohol and other drugs are mixed, they may react together in a way which is harmful and sometimes very dangerous.

It is worth noting what kind of drug alcohol is. It is a <u>depressant</u> drug. This means that it dulls the activity of the brain, rather like some drugs which are used as sleeping tablets.

You may be surprised to learn that alcohol is a depressant drug. Many people think it is a stimulant, because it often makes people become more talkative, and sometimes even aggressive.

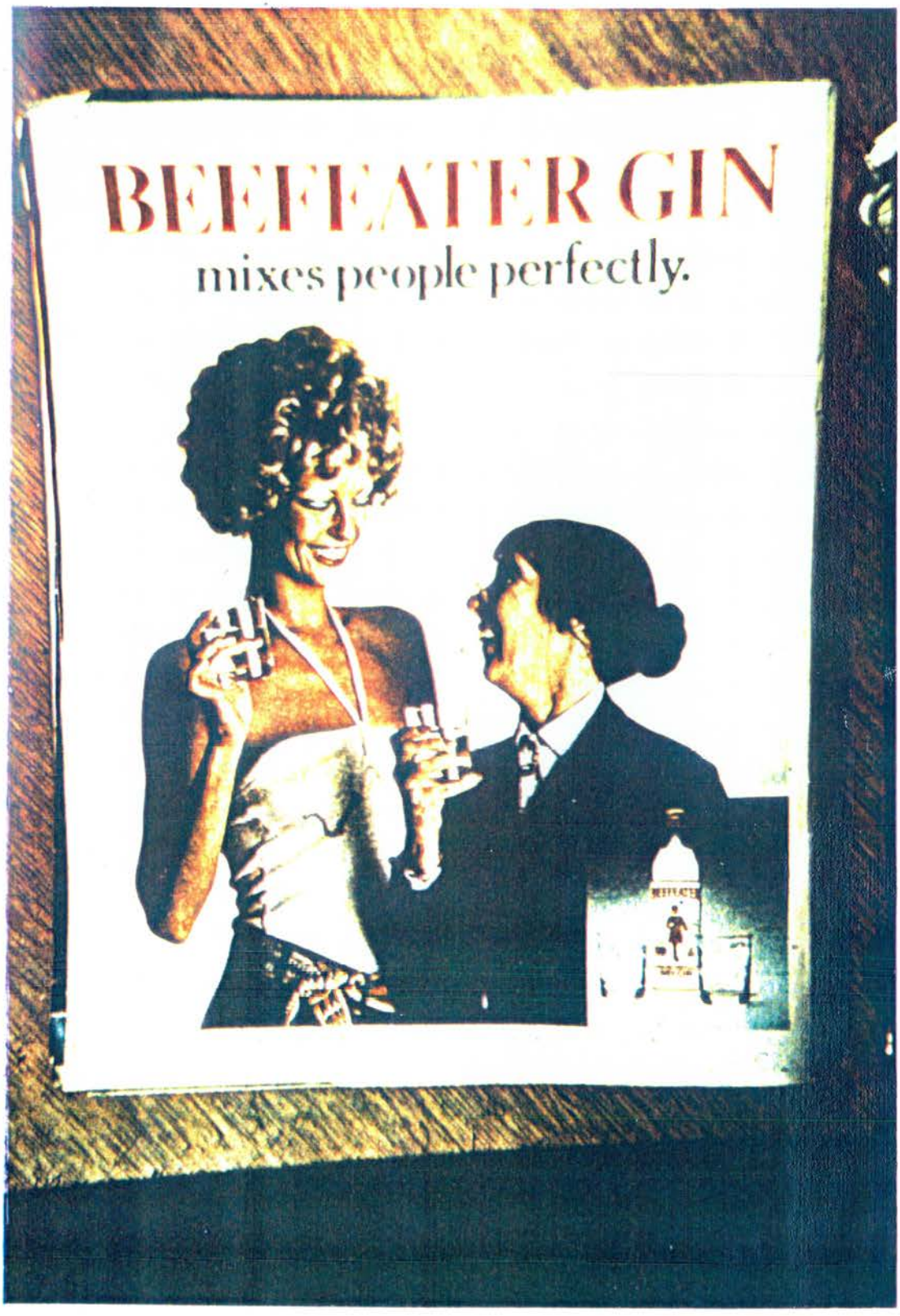
But it is the depressant effect of alcohol which makes people less inhibited and care less about what other people think of them.

Most of us have seen this effect at some time!

And because alcohol dulls the working of the brain, it could be dangerous to give alcohol to someone who has just been shocked or injured in an accident.

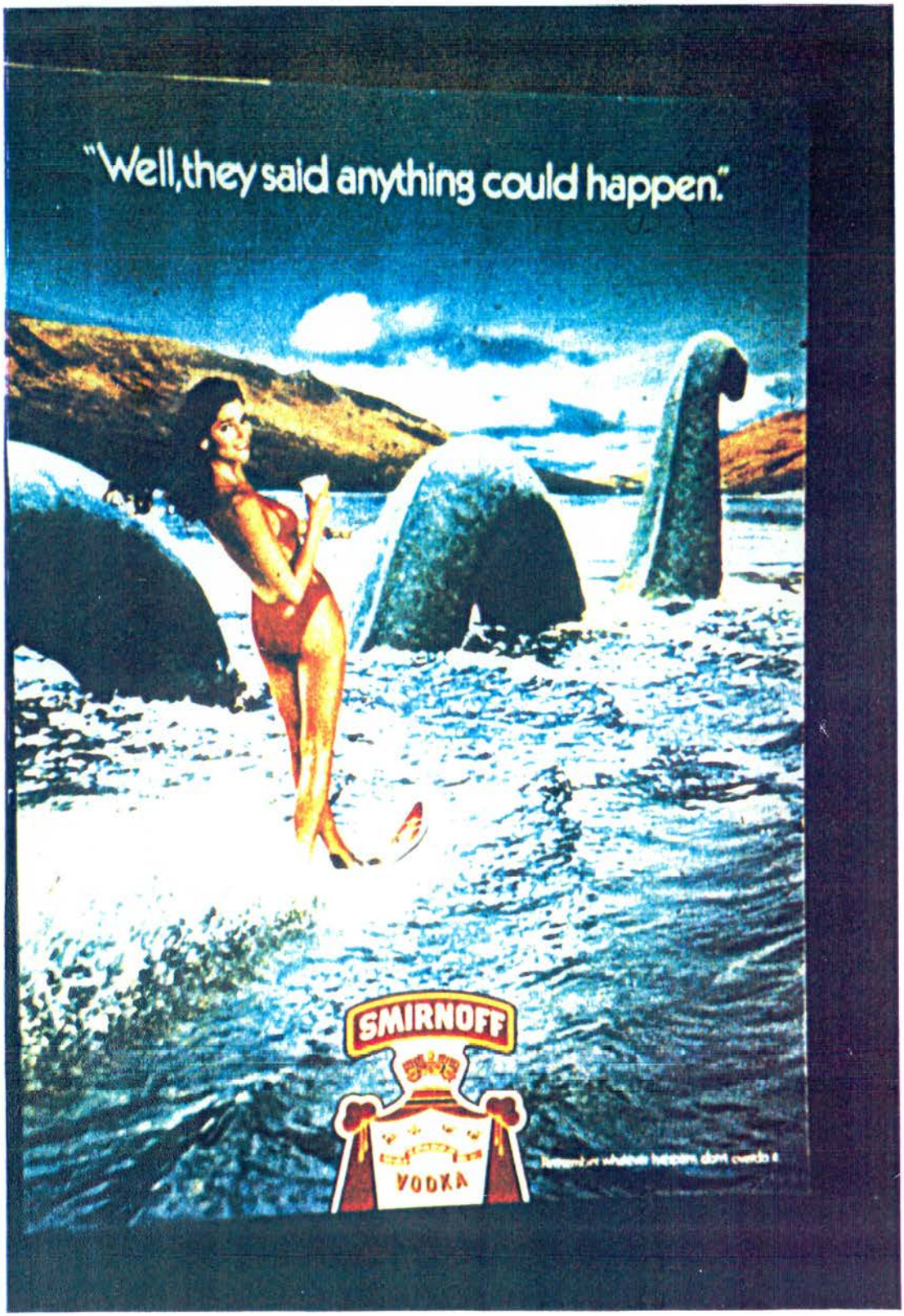

TACKLE A BOTTLE OF GUINNESS EXTRA
EXTRA GENIUS


ON FORMS
BACARDI
BACARDI AND A LITTLE IMAGINATION.


BEEFEATER GIN
mixes people perfectly.


König Pilsener
if you've got it, flaunt it.
MORE O'FERRALL P.L.C.


E SHAPE OF DRINKS TO COME-GORDON'S.


"Well, they said anything could happen."
SMIRNOFF
VODKA

APPENDIX 6a. Teachers' Feedback Form for Main Study

FEEDBACK FORM FOR TEACHERS

Below you will find a feedback form to be filled in.

We would like your HONEST opinion about this teaching package, so please don't be embarrassed to say exactly what you think! The form will be completed anonymously.

1. Were you in general agreement with the overall rationale of the package? Yes ___ No ___

   If NO, could you say why not?

   _____

   _____

   _____

2. The pupil objectives for each activity are detailed in the teacher's notes. On the basis of your experience of using the package, do you think any of these objectives are unrealistic? Yes ___ No ___

   If YES, which objectives are these? Can you indicate briefly why you think they are unrealistic?

   _____

   _____

   _____

3. Was there anything in the package which you did not like having to teach? Yes ___ No ___

   If YES, can you describe briefly what this was, and why you didn't like teaching it?

   _____

   _____

   _____

4. Was there anything in the package which you felt was not suitable for this particular group of children? Yes ___ No ___

   If YES, can you describe briefly what this was and why you felt it was unsuitable?

   _____

   _____

5. There is considerable emphasis on small group work and discussion.
Did you have any difficulties with this? Yes ___ No ___

If YES, describe these briefly _____

_____

_____

6. Was there any activity which you were unable to complete according to the guidelines in the manual? Yes ___ No ___

If YES, can you say which activity this was, and briefly describe the difficulty?

_____

_____

_____

Do you have any other comments on your experience of this package?

_____

_____

_____

_____

Finally, could you complete a little information about yourself. Remember this form is absolutely anonymous.

Are you male or female? _____

What age are you? _____

How many years have you been teaching? _____

What subject do/did you teach as well as (guidance
(social education
(religious education _____

THANK YOU VERY MUCH FOR COMPLETING THIS FORM.

APPENDIX 6b. Pupils' Feedback Form for Main Study

PUPIL FEEDBACK SHEET

Now that you have reached the end of this alcohol education programme, you may find it interesting to think back to all the activities you have done.

To help you do this try and note down some answers to the following questions.

1. Which Activity did you like most? _____

   (write in) _____

   _____

2. Why did you think this was the best activity ? _____

   (write in why) _____

   _____

3. Which activity did you like least? _____

   (write in) _____

   _____

4. Why did you not like this activity ? _____

   (write in)

   _____

   _____

5. Do you think you learned anything that you didn't already know?

   Answer YES or NO _____

6. If you answered YES, can you note down something you have learned.

(write in)

_____

_____

Please write down here anything else you would like to say about the alcohol education programme you have just completed in school.

_____

_____

_____

_____